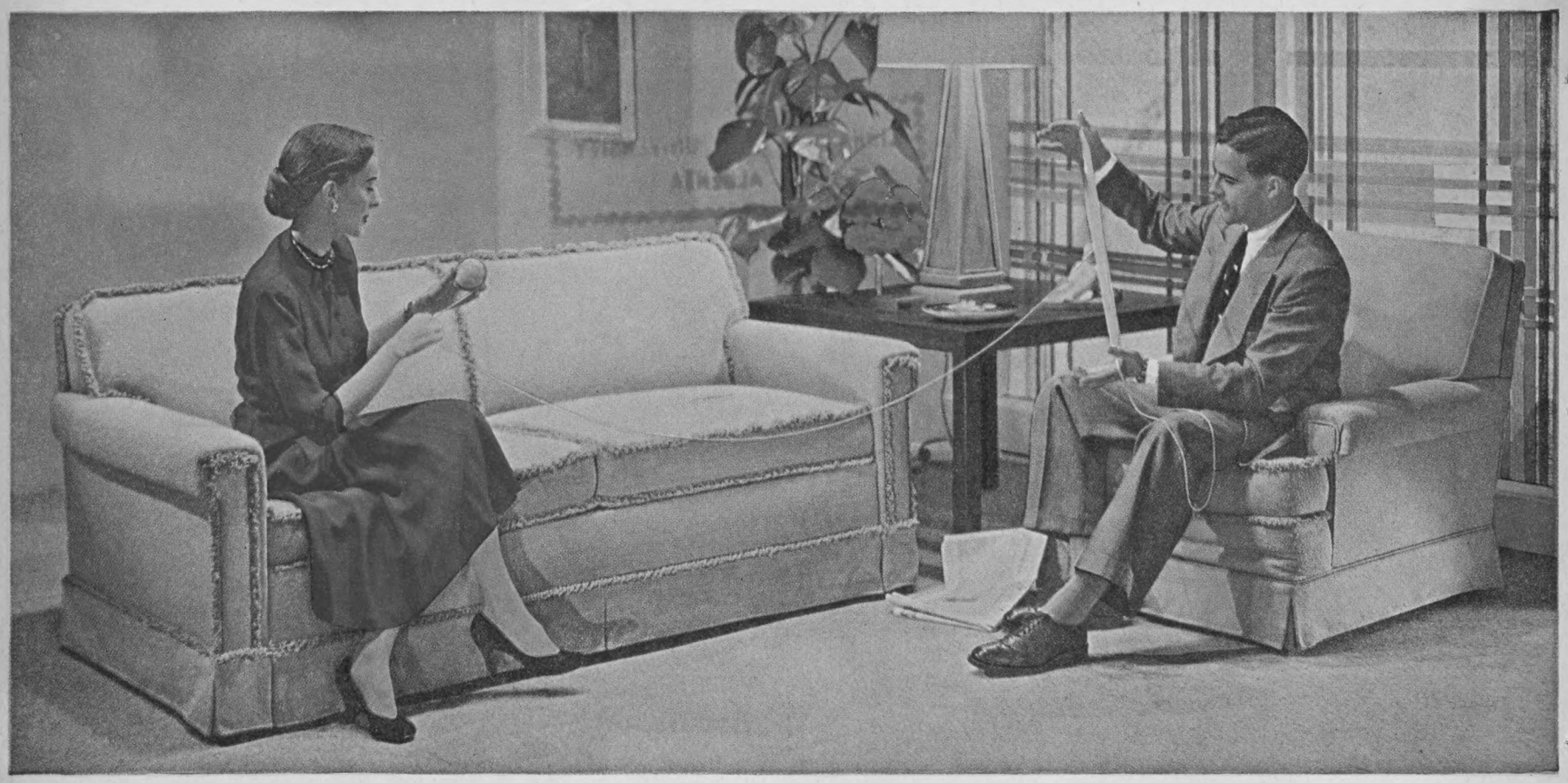
THE Country GUIDE

AUGUST
1952

Beat housing headaches!
Two rooms for one with "HIDE-A-BED"



Bless Simmons for this glamorous new space-saver! Here is Hide-A-Bed*—luxurious sofa-bed made only by Simmons—for no more than you'd pay for a fine sofa alone!

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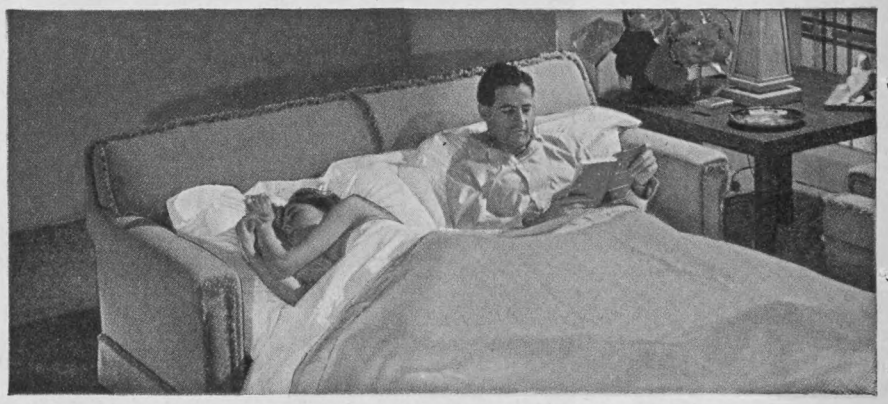

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If you wish you can buy chairs to match—Simmons chairs. Just think what one trip downtown can do for a tired old room!

At top of page, Hide-A-Bed in modern Lawson style, covered in grey textured fabric with all-over thick bouclé trimming. Matching chair.

At right. Regency style Hide-A-Bed in green matelasse with green base bouclé fringe. Self-welt.

Only *SIMMONS LIMITED* makes HIDE-A-BED

MONTREAL • TORONTO • WINNIPEG • VANCOUVER

Photo by H. Armstrong Roberts

THE Country GUIDE

From Cover to Cover

AUGUST, 1952

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Now...only the FAR MORE POWERFUL FERGUSON Twenty 85 can have the famous FERGUSON SYSTEM with

Exclusive SSC* SUCTION-SIDE CONTROL

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★ in power
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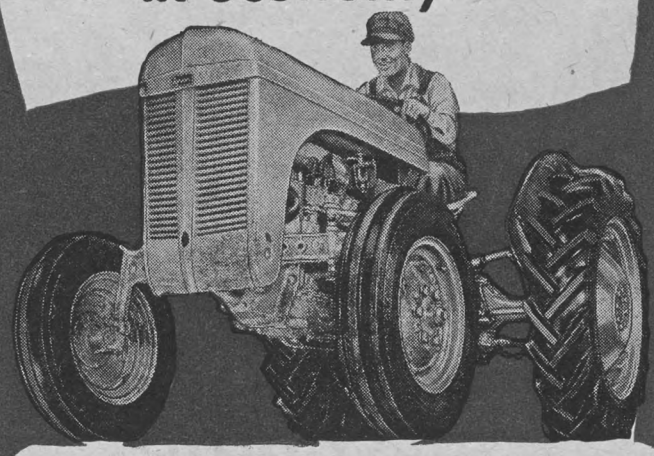


*As a result of the consent judgment in the recent settlement of the Ferguson vs. Ford lawsuit, Ferguson, and *only* Ferguson, can now have the famous Ferguson System. If you want the *advantages* of the Ferguson System, the Ferguson *Twenty*-85 is the only tractor that can give them to you.

Remember this . . . the Ferguson System is far more than 3-point linkage. True, this linkage is a part of the Ferguson System that can be seen. But, the Ferguson System control center is *inside* the tractor, the very heart of the machine.

There are other tractors on the market that are and will be similar in *outward* appearance to the Ferguson. *Don't be fooled by these outward appearances!* A *vital* and *exclusive* feature of the Ferguson System—the hydraulic pump with *Suction Side Control*—is buried deep within the tractor.

Your Ferguson Dealer will arrange a "Showdown" demonstration of the new and far more powerful Ferguson *Twenty*-85 on your farm. He will gladly prove to you the advantages of the Ferguson System with *exclusive* Suction Side Control.

This Booklet Tells the Story

Important facts about the Ferguson System and *Suction Side Control* are clearly and simply explained in this new booklet. Ask your Ferguson Dealer for a copy of "The *Inside* Story of the Ferguson System with Exclusive Suction Side Control".
Harry Ferguson, Inc., Detroit 32, Mich.

FERGUSON TRACTOR
and 63 Ferguson System Implements

Under the Peace Tower

WESTERNERS will be interested in a conference of trade and financial experts to be held in Ottawa in November, the effect of which, if successful, will be to get more markets for Canadian goods. This is being pushed by George Nowlan, president of the Progressive-Conservative Association, and presumably has the endorsation of such westerners as Art Ross, M.P. for Souris; John Diefenbaker, Lake Center, Saskatchewan; and both Douglas Harkness and Carl Nickle, East and West Calgary.

This conference is to have the avowed purpose of unplugging the channels of trade. The government has acquiesced to the demands for such a conference and it was given a nudge behind the scenes by Australian Prime Minister Menzies when he was here a while back. The British are reported to be all for it. For once it will not be a politician's gab fest. They will be left at home while our fiscal and economic experts get down to business. If all goes well, it is hoped that dramatic announcements will be made next summer after the Coronation in a sort of joint empire statement.

In a word, Canada is trying to get back into the British Empire again.

What has happened to the West has not been good. Consider the following figures:

Barley—in 1938 Canada supplied 27.5 per cent of total British imports; in 1951 this market is lost with the largest supplier being Russia!

Oats—in 1938 Canada supplied 93.9 per cent of U.K. imports; in 1948 we lost the market, largely to the Iron Curtain.

Beans—in 1938 we supplied 24.3 per cent of total U.K. imports; this market is now lost.

Beef—in 1943 we supplied 43 per cent of total U.K. imports; Argentina has it now.

Bacon—in 1938 we supplied 18.1 per cent; as recently as 1948 we supplied 70 per cent; we are now down below prewar records.

Hams—in 1938 we supplied 34 per cent; in 1947 it was 78.5 per cent; this market now lost.

Poultry—in 1947 we supplied 18.2 per cent; Poland and Hungary have the business now.

Eggs—in 1945 Canada supplied U.K. with 56 per cent of her imports; Poland and China now have the business.

What applies to the prairies is also applicable to the far West in the case of lumber, apples, pit props and salmon. Ontario and Quebec are in a bad spot with their tobacco. Britain has cut her tobacco imports from Canada by 75 per cent. So it goes. A sad picture; a blue future.

Figures herein are on the Hansard and have been advanced by George Drew and other P.C. officials. The figures have been checked with public accounts of Trade and Navigation of the United Kingdom as tabled in the British House of Commons.

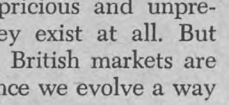
Many here in Ottawa believe that the British Empire offers the only outlet left for our agricultural products if other markets fail. The farmer who has a field of wheat say, in Snowflake, Manitoba, knows this: that he can stand in his wheat field and actually see the United States. Yet he knows that the American market is out of bounds to him and that instead, the boxcars will take his grain North and East and 2,000 miles across land, then 3,000 miles across the ocean to Britain. In other words, our markets in the States are capricious and unpredictable when they exist at all. But for the most part, British markets are reliable markets once we evolve a way of trading with them.

What worries many a Canadian expert right now is how long will the U.S. market last? There is a sly and dangerous "out" in the international tariff arrangement which was dreamed up at a conference at Geneva. This has the effect of permitting the U.S. to shut out Canadian goods overnight almost on whim. In a word—you cannot depend on the U.S. markets.

This is notably true in agriculture because similarity of products keeps Canadian agricultural products out anyway. Britain and the Commonwealth then look like a good bet.

Currency is of course the big problem. Experts call it convertibility. It has been suggested that since we buy much from tropical and semi-tropical areas we could take things from say, the Indies and other British sources. This would proscribe U.S. oranges and bananas for instance. This colonial buying would in turn give the British the dollars they need and these dollars would come back to us for things that Britain really requires from us and which we would like to sell them.

And so the experts meet here next November. The Canadian government Brain Trusters are already studying their homework; they are assembling pertinent papers. What they want to find out is where we are losing Canadian trade and how we can get it back. This is not just a sentimental flag-flapping Buy British. It is a hard-boiled approach to selling more goods. It is money in all our pockets if the boys can put it over.

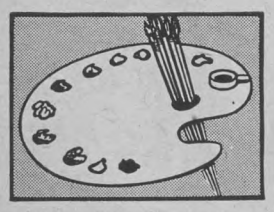


Pontiac

the most beautiful thing on wheels!

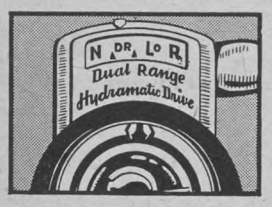
A General Motors Value

Illustrated—Chieftain Deluxe 4-Door Sedan



Radiant new color harmonies inside and out

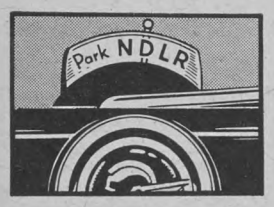
Pontiac's famous Silver Streak styling is now more glamorous than ever! There's a wide range of beautiful glowing exterior colors. Interiors are rich and colorful—and, in Fleetleader and Chieftain Deluxe models, even the steering wheels and instrument panels harmonize with the new two-tone interior color ensembles.



Your choice of completely automatic transmissions

*DUAL-RANGE HYDRA-MATIC DRIVE**

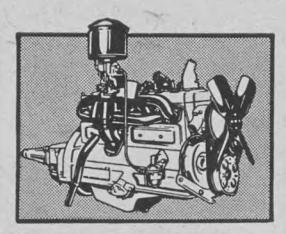
Driving a Pontiac Chieftain with Dual-Range Hydra-Matic Drive is like having two entirely different power plants always under finger-tip control—automatically. In Traffic Range, you have instant response and flashing acceleration. In Cruising Range, you glide over the miles so smoothly, so economically, it's almost like coasting.



SILK-SMOOTH POWERGLIDE†

In a Fleetleader Deluxe with PowerGlide—first fully-proven automatic transmission in the low-priced field—you enjoy an unbroken flow of smooth, dependable power. PowerGlide is simpler, with fewer parts. And it's oil-cooled for long life under all operating conditions.

**Optional at extra cost on Chieftain series*
†Optional at extra cost on Fleetleader Deluxe series



Powerful, economical high-compression engines

Horsepower has been increased in both the Pontiac "6" and "8". Each of these two great high-compression engines gives you this extra power and stepped-up performance without any sacrifice of economy. And, of course, Pontiac engines have long been famous for the dependable, trouble-free operation which stems from their superior design and craftsmanship.

. . . and a host of other features

For the driving pleasure of your life, get behind the wheel of a Pontiac. Every single model of the exceptionally wide range of Fleetleaders and Chieftains is packed with features designed to add to your motoring comfort, safety and enjoyment. Features like GM "Shade-Lite"‡ tinted glass all around, which filters out dangerous and unpleasant glare and heat, and includes the exclusive *shaded* windshield.

Whatever the model you decide to try on the highway, we confidently prophesy that you'll be thrilled by its smooth, effortless driving ease, its distinctive Silver Streak styling, the atmosphere of taste and luxury reflected in every single appointment, inside and out.

So don't delay. Visit your Pontiac dealer . . . prove for yourself that this amazing Pontiac is the most beautiful thing on wheels . . . the most beautiful buy of all!

‡Optional at extra cost

Dollar for Dollar and Feature for Feature . . . you can't beat Pontiac

F-52P-3

The Scientist and the Farmer

Good farmers and farm scientists have launched a joint front against all forms of soil erosion . . .

while others have studied the economical use of water, or the cause and control of plant and animal losses.

Agricultural science is making a large contribution toward increased production of better farm products with less outlay of work

by MARCIA HARRIS

HAVE you ever sunk your teeth into an apple, and encountered unpleasant light-brown patches of dead tissue? That is "corky core," a defect that was ruining the apple crop in the Okanagan Valley some years ago. Dr. H. R. McLarty, at the experimental station at Summerland, B.C., discovered that corky core can be prevented by applying boric acid to the soil around the trees. When the use of this treatment became general, apple production in the Okanagan Valley increased by a million boxes. Almost at the same time, a similar achievement by L. C. Young, at the Fredericton experimental station, saved the apple industry in the Maritime provinces many thousands of dollars each year.

These incidents belong to the remarkable story of the progress of science in agriculture. So rapid has been the advance in farm science fields during the last 30 years, that there are many farmers still living who can remember the time when science was not believed to be of much concern to agriculture.

There is no doubt that agriculture was well developed when man's written history began. There was even some farm science 2,000 years ago, but by our present standards it was very primitive. From the seventeenth century onward, the science of agriculture developed very slowly.

Even as late as 100 years ago, there was very little that was recognizable as science, in farming. For all practical purposes, we may say that it was not until about 1900 that farm science, as we know it today, began to develop with noticeable rapidity. The first gasoline tractor appeared in 1892, and Mendel's law of heredity was rediscovered in 1900. Progress has been especially rapid since World War I; and today scarcely a week passes but some new scientific discovery promises to be helpful in food production, or to provide new markets for farm products. It is not too much now to say that the art of farming is the successful application of scientific knowledge to the business of agriculture.

BY 1920, the number of agricultural college graduates in Canada had reached substantial numbers. Most of these graduates were in the employ of provincial and federal departments of agriculture, though some had returned to the farm. In that year, it was recognized that this specially trained body of people had a common responsibility to agriculture, and to society; and a national organization was formed, which is now known as the Agricultural Institute of Canada. It has today more than 3,000 members, in 24 branches, from Vancouver Island to Prince Edward Island.

In more recent years, while continuing to support this joint effort across Canada in the interests of agriculture, its members in some provinces have felt the need for a special type of organization which would give professional status under the law, to agricultural scientists working within an individual province. As a result, provincial "institutes of agrologists," as they are called, now exist in Quebec and the four western provinces. The name "agrologist" is derived from two Greek words—*agros*, meaning "land or farm," and *logist*, meaning "scientist." Like the professional organization of doctors, lawyers, engineers and many others, institutes of agrologists are authorized by special act of a provincial legislature. It is the aim and purpose of these institutes to render still more efficient service to agriculture and to society, by means of more effective organization.

Long before there were any agrologists, however, there were hard-working agricultural scientists who, with the methods and knowledge available to them, discovered many new things of great value to the farmer. The plant breeder of today benefits from 50 years of intensive research in plant breeding. As a result, he can, given the necessary time and money, put into a variety almost any character that is needed. The way to success was not lighted nearly as well in the early 1900's, when Dr. Charles E. Saunders was selecting the wheat which was ultimately to be named Marquis. Nevertheless, so valuable was Marquis that it was largely responsible for a phenomenal expansion of wheat growing in the prairie provinces, from eight million acres in 1910 to 17 million acres in 1920. Marquis was early, yielded well, and possessed such excellent milling and baking qualities that it is still our standard in this respect. No wonder that it has been described as "one of Canada's greatest practical triumphs."

Dr. Saunders was later knighted for his achievement, but at the time he selected Marquis, he was receiving a salary of $100 a month—no more. In these early days, farmers were inclined to be critical of "white collar" farmers. Neither farmers nor governments—for whom most of them worked—believed that these early agricultural graduates were worth as much money as the men in other professions. Indeed, it is only within comparatively recent years, when many of our agricultural graduates and potential scientists have been attracted into industry, or to the United States and other countries, that farmers and governments have recognized the value of well-trained people in the various fields serving agriculture, and have made special efforts to keep these expensively trained young people at home in Canada.

REMEMBER the drought years, the dust storms that covered the sun, and the filled ditches and drifted fencerows that were left? Who doesn't? Remember the doubts expressed during the thirties as to whether the prairie wheatlands would ever produce good crops again? Farmers for years had been thoughtlessly mining the soil, burning the straw, keeping summerfallows black and clean, so that when the winds came in the midst of drought, the richest soil was the first to blow away. Agricultural scientists began to study ways and means of keeping the soil in place, and of conserving the limited amount of available moisture. They found implements and cropping practices, some of which farmers themselves had first developed; they experimented with them, tested them, improved on them here and there, and eventually were able to make recommendations that, if followed today, will not only conserve more moisture, but make all harmful soil drifting unnecessary.

Today, the use of trash cover, strip and contour farming, the development of dugouts and stock-watering ponds, and the efficient conservation and distribution of limited water supplies by means of reservoirs and irrigation systems, represent a combination of soil science and engineering which, applied to the art of farming, mean a greater measure of security and a higher standard of living for farm families. Years of education in the use of newer power implements, such as the one-way disk, the disker, the duckfoot cultivator and others, have helped to put prairie agriculture almost beyond the reach of another disastrous year such as 1937. In that year, it was necessary to ship into Saskatchewan from other provinces about 500,000 tons of feed, and her entire wheat crop was not more than

(*Please turn to page* 30)

THE BARN WAS A PEACEMAKER

by **CECIL C. FOSTER**

Father stuck his thumbs in suspenders and leaned back in his chair. "Any color you wish, Martha," he repeated.

I WON'T go so far as to say that Mother's decision about painting the house nearly wrecked our happy home. But it certainly did cause some tension.

We had just finished our noon meal and Father had reached for his old, black pipe. He lit it, breathed the happy sigh of a well-fed man, then said as he watched the blue smoke wreathing upward: "It's been a prosperous year, Martha. I've been thinking it might be a good time to get the barn and house painted."

Mother smiled. "That would be grand, Henry. The house has been in need of paint, outside and in, for a long time."

"Could we paint it green, Mom?" I asked eagerly, excited as any 12-year-old girl would be at the prospect of gleaming paint. "Green with white trimmings?"

"Now, you just leave it to your mother," Father reprimanded. "She can have it painted any color she wants. When we came here after we were married the house was brown, and it has been brown ever since. This time she can make the decision."

Mother's eyes were half closed and her face looked like it always did when she started talking about fur coats and trips to California. "Any color I wish, Henry?" she murmured. "How wonderful."

Father stuck his thumbs in his suspenders and leaned back in his chair as if he were smoking a big cigar. "Any color you wish, Martha," he repeated. "I aim on having the barn painted red, with white trimmings."

"That will be lovely, Father," I agreed. "Maybe we can get a name put on the roof like the Simmons have on their barn?"

"Maybe we can, Chick," Father said. This was the name he always called me when he was in good humor. "Maybe we can."

"When will we start?" I asked him.

"Right away. As soon as your mother decides on the color for the house and we can get the painters out here."

"I have made my decision," Mother said dreamily.

"That's fine. Everything is settled then," Father said, hurriedly pushing back his chair. "I'll go phone the painters right now."

"IS it going to be green, Mom?" I asked.

"Pink," Mother said, her eyes far away.

Father almost lost his pipe as his mouth fell open. "Pink!" he said incredulously, staring at her. "Did I hear you say pink?"

"Pink," Mother said.

It seemed to take Father a few moments to understand this, and then he placed his hands firmly on the table. "You're joking, Martha. Nobody ever paints a house pink."

Mother sighed as people sometimes do when coming out of a deep sleep, and then she said sort of abstractedly: "I've dreamed about a pink house for years. Pink with pale blue trimmings around the doors and the windows."

"What in the name of thunder ever gave you an idea like that?" Father said darkly, and he wasn't smiling when he spoke.

"It would really be nice, Father," I said bravely, trying to prevent the storm I saw coming. "Can you imagine . . ."

"I can," Father snapped. "You keep out of this, Ellen."

Father had said that mother could have the house painted any color she wished and he was a man who kept his word. His promise brought complications in our home

I knew what the "Ellen" indicated, so I subsided and looked at Mother.

Mother described the house to us, her hands moving delicately as she illustrated her description: "I saw it in a magazine one time. It had the dearest little flower beds at one side, and a white lattice fence across the front, and a bird bath in one corner, and . . ."

"The neighbors laughing at us," Father interrupted moodily.

"Let the neighbors laugh," Mother said a little more vigorously.

"I won't have it," Father shouted. "Any sensible color like brown or green or even cream, but not pink. Why it would . . ."

"You promised, Henry," Mother said with determination, "You said I could have any color I wanted."

Father scowled and ran his hands through his thick, black hair. "I know I did, but I thought you would use some common sense."

For a moment Mother looked steadily at Father and then she said emphatically: "It is common sense. It will be my dream house."

"Dream house," Father snorted. "It will look like a . . . like a day nursery or a kindergarten school."

He got up from his chair and took his hat from a peg on the kitchen wall. "Are you going to phone the painters?" Mother asked.

"Not on a party line to tell them you want the house painted pink," Father said gruffly. "I'll drive into town and give them the bad news."

Illustrated by J. H. Petrie

"You're being dramatic, Henry," Mother said. "And a bit foolish in the bargain."

Father didn't say anything as he left the house, and a few minutes later we heard the car leaving the yard. Mother sighed, ran her hands over her apron, and then began piling the dinner dishes. "Men get huffy so easily," she said to me.

I helped her, but I avoided her eyes because I didn't think much of her choice of color, either. I had hoped for green.

FATHER came back from town a few hours later and he seemed to be quite cheerful. "Did you order the paint?" Mother asked as he entered the house.

"I did," Father said.

"Pink?" Mother asked suspiciously.

"Pink," Father answered easily.

Mother looked at him closely, "I thought you would see it my way, Henry."

"I keep my promises," Father said. "But I still think it will look terrible."

"Are they going to paint the barn or the house first?" I asked.

"The barn," Father told me.

A few days later the painters' truck came into the yard and stopped near the barn. I was at the back door, carrying in an armful of wood. "The painters have come, Mom," I said to Mother who was preserving peaches.

"Good," Mother said. "The sooner they finish the barn, the sooner they can start on the house."

I helped her for some time with the peaches and then I went out the back door again to bring a pail of water from the well. I looked down toward the barn and my eyes nearly popped from my head.

"Come here, Mom," I called excitedly.

Mother came to the door in a hurry.

"Am I seeing things?" I asked, pointing in the direction of the barn.

"You are not," Mother said, biting her lips. She threw her apron over a chair. "Come with me, Ellen."

WHEN we reached the barn we saw Father sitting on an empty nail keg, placidly watching the painters who had painted several square feet of one side of the barn.

"I thought you were going to paint the barn red, Henry!" Mother said, breathing quickly.

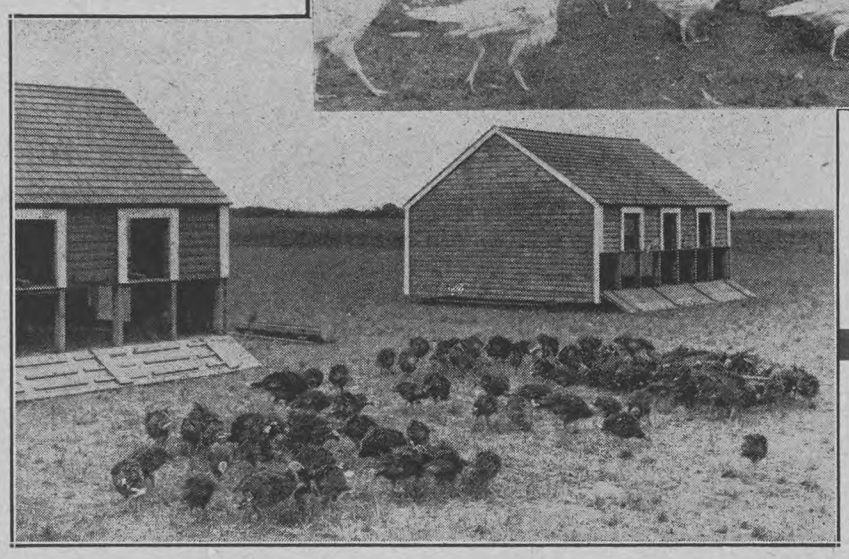
Father chewed at a straw. "I changed my mind, Martha."

Mother gazed helplessly at him. "But you can't paint a barn purple!" (*Please turn to page* 56)

TALKING TURKEY

. . . with James and Don Fraser who have streamlined production techniques, and for the last ten years have made good returns from the sale of poults and market birds

by **RALPH HEDLIN**



Above: James Fraser discusses some problems of turkey management with D. C. Foster, poultry specialist, Manitoba Department of Agriculture.

Left: A few of Don Fraser's broad-breasted bronze turkeys do some last minute feeding before going to roost in the sturdy field shelters.

EVER since 1914 anyone could have told what was being produced on the Fraser farm at Gunton, Manitoba, by the use being made of their two-storey barn. It was built for horses, and for many years the farm specialized in grain. Then the tractors came and the stalls in the barn gave way to pens, and cattle moved in. The Frasers later went out of cattle and, at Don's suggestion, the barn was altered to make a laying house capable of housing 260 laying turkey hens. In the decade since that suggestion was made, thousands of turkey hens have laid tens of thousands of eggs in the old horse barn.

The Frasers entered the turkey business in 1941. Father and sons, Don and James, were in a loose partnership at the time. They bought 20 breeder hens, ten of them broad-breasted bronze, some of the first broad-breasts to come into Manitoba. Before long they were entirely into the broad-breasted birds, and had sent all their standard bronze to market. They kept around 1,000 birds each year, though a peak of 2,500 was reached in 1950.

James was alone on the farm that year. His father had retired to Winnipeg in 1945 and Don, who had recently returned from the navy, had set up on a neighboring farm, and was running 2,000 birds, a mile to the north. The Frasers had firmly established themselves among the pioneers of large-scale turkey production in Manitoba.

"They were among the first with the broad-breasted bronze in Manitoba, and were among the first to exploit the efficiency of large-scale production; also they produce a quality bird," said D. C. Foster, poultry specialist, Manitoba Department of Agriculture. "Added to that, they are now among the first with the new 'Nebraska' breed." But more about the Nebraska breed and the quality of the Fraser birds later.

BOTH James and Don are big turkey producers, but James has become a specialist in the business, and most of this story is based on his experiences. Don is operating an 800-acre farm alone, and he has found it hard to do the chores that a large flock of turkeys demand. He has 400 acres of land still under bush and he feels that he can do better by getting this land into production than by raising turkeys. So Don has taken to riding a brush-breaker rather than carrying pails of turkey feed.

It is often difficult to get out of some line of livestock production once you get in. Don raised 2,200 turkeys in 1950, thought it was too much of a good thing and cut down to 275 in 1951, but this year not only sold over 1,000 pullets but is raising 400 birds for market. "The 275 birds took so little work that I thought I might as well have a few more," he said. "And you know, you would be surprised how little work there is even with 400." Chances are he will be up a couple of hundred again next year! The Frasers seem to like to see a flock of turkeys picking around the farm.

James Fraser has only a half section of light soil and most of his land and buildings are now employed in turkey production. He has an incubator house, a brooder house, a laying house (the old stable), and a killing house. The brooder house is the only one that was built especially for the turkeys; the others were put up for other purposes and have been modified at no great cost.

The incubator house is fairly standard. It contains a three-unit, electrically operated incubator with a capacity of 5,100 eggs. James puts a lot of eggs through the machine each spring and sells most of the hatch as one-day poults.

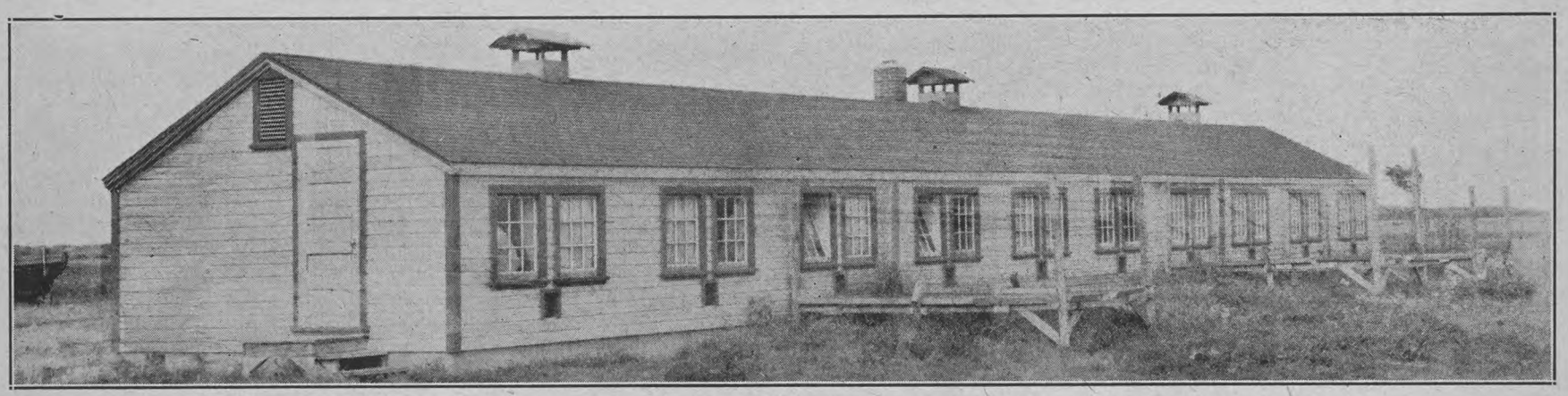
Birds for breeding stock or for the Thanksgiving or Christmas market go to the brooder house. Their first stop is in an electrically heated battery brooder, where they spend the first week. This brooder consists of four pens, one above the other, and will accommodate 600 birds. Early brooding in batteries allows close control of heat, and starts the poults eating—a problem with small turkeys.

At the end of a week the birds go into any one of the nine pens in the brooder house. For the next five weeks they can go under the electrically heated hover, wander around the ten by 13-foot pen, or go out for "hardening" on a wire-floored sunporch on the south side of the brooder house. The porches are eight by 12 feet, divided in the middle to serve two pens.

The nine pens in the brooder house will accommodate 1,350 poults without crowding, and up to 1,800 if necessary. With two sets of birds going through in a season the brooder can handle anywhere from 2,700 to 3,600 birds. The house is 16 feet wide and 100 feet long and cost in the neighborhood of $4,000 equipped. It is the one big capital expenditure incurred for the turkeys.

FROM the brooder house the birds go on range, and here the Fraser brothers adopt different techniques. James has fenced six acres of stubble land and lets his 550 birds graze off volunteer grain, sow thistle and other weeds. Don ranges his birds on a mixture of brome, alfalfa, meadow fescue and yellow sweet clover.

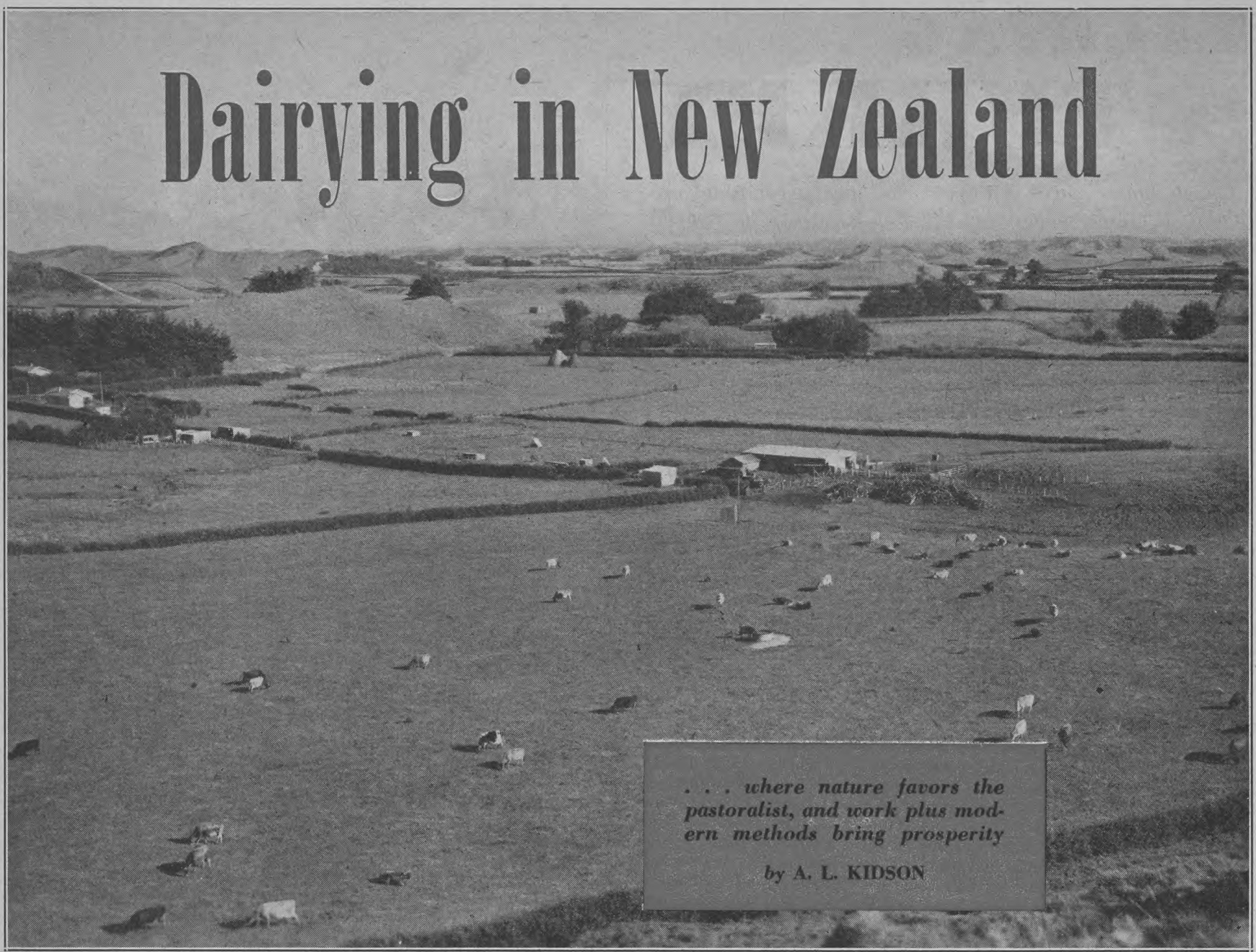
James self-feeds the birds on range with whole oats and a 35 per cent protein turkey supplement. For about a month before marketing they are fed whole wheat and fattening pellets. When they first go on range they sit on the wire floor in the field shelters about 14 inches above the ground, but after three weeks they use the roosts. The shelters are moved every two weeks, so that grain grown on the spot in later years will not lodge. Turkey droppings significantly improve the fertility of the land ranged.



James Fraser broods the turkey poults raised on his Gunton, Manitoba, farm in this $4,000 brooder house.

AROUND the first week in October excess birds are collected at the killing house. Pieces of one-inch board two inches wide and ten or 12 inches long have been nailed to the ceiling studs; the turkeys' legs are put into deep notches in the ends and a nail slipped through a horizontal hole drilled across the board, to hold the bird fast. Half a dozen birds at a time are hung from such boards. The jugular vein is cut (*Please turn to page* 55)

Dairying in New Zealand



. . . where nature favors the pastoralist, and work plus modern methods bring prosperity

by A. L. KIDSON

Good pasture management and high production cows permit New Zealand's dairymen to sell butter in Canada, and compete with Denmark for the British market.

THIS year, as in the year just past, Canada has had to import several million pounds of butter from New Zealand. How does that small country—of only 100,000 square miles—manage to produce enough dairy produce to feed its own two million people, and still have a surplus for export? How, in fact, has New Zealand contrived to become the world's greatest exporter of both meat and dairy produce, and the second largest exporter of wool?

The country, it is true, has many natural advantages—a good rainfall, fertile soils, and large rivers for making electricity. Over most of the North Island the climate is mild, so that livestock can be grazed out of doors the whole year round. The New Zealand farmer has no need to house or hand-feed his animals, even in the coldest months. Mostly the rains are gentle, sometimes warm, and well spread over the seasons. Annual hours of sunshine equal those of Italy.

During winter, some "feeding out" is done; silage, or hay made from grass or alfalfa, is taken round the paddocks on carts or sledges and tossed to the stock. At this time of year, from May until calving-time in early September, the cows wear waterproof rugs, lined with felt or sacking. In some districts turnips or mangolds are used for supplementary feed; while in the drier areas, during summer, many farmers let their herds graze on specially grown green fodder crops—kale, rape, etc. —to offset the falling away of the sward. In the main, however, by top-dressing and rotational grazing, the New Zealand dairyman can rely on his pastures throughout the whole year.

His life, for all that, is not one of ease and luxury. His sleek herds and lush pastures were not there in the beginning, nor did they come by chance. Not by wishing has he built up markets in Britain, 12,000 miles away, and held them against competition from the favorably placed Dane, the Dutchman, and the diligent North German.

Three-quarters of New Zealand is highland, much of it mountainous, with peaks ranging to 12,000 feet. A century back it was forest-clad from the mountains to the sea. There were a number of treeless plains, growing coarse high tussock—but no native pasture grasses, no animals of any kind. Swamps to be drained there were in plenty; rivers to be bridged; harbors to be developed into ports; hostile natives to be subdued and reconciled.

Farming was first commenced by the missionaries, around 1840, and they used the arable or "mixed" methods of the Mother Country, producing crops of wheat and potatoes for local needs, or for sale in Australia. Dairying developed as a sideline on these small holdings, which, by 1880 were mainly in the hands of military settlers who had fought in the Maori Wars of the North Island. In the south, and on the treeless eastern plains, large tracts were acquired often by "absentee landlords," for raising sheep.

With the invention of refrigerated shipping the New Zealand dairyman saw his first hopes of prosperity. From 1882 it became possible to send shipments of butter and cheese to the British market. The demand for land became keener. Laws were made to break up the large holdings of the sheepmen, and New Zealand gradually assumed its present character as a country of small or moderately sized farms.

Today, the typical New Zealand dairy farm has from 50 to 100 acres. It is a "family" unit, run by one farmer-owner, or lessee, with help from members of his family or a hired man or two. Herds average from 40 to 50 cows, with an average butterfat yield of some 240 pounds per cow per annum. Sometimes, herds are owned by "share-milkers," men or families who do not own or rent the land they farm. These have an agreement with the landowner whereby they live on the property, maintain it, and tend the livestock, taking as their reward an agreed share of the season's profits.

PRACTICALLY all milking is done by machine. The country has some 31,000 separate milking plants, formerly run on oil, but now mostly by electricity. Electric power is used also for heating water for the cleaning and sterilizing of dairy utensils, and for providing amenities—radio, washing machines, carpet sweepers, etc.—in the home. For the New Zealand farmer is far removed from the "peasant" type. While working hard, he believes in maintaining a high living standard for himself and his family. He usually owns a good auto, ponies for his children, sometimes a hack, or thoroughbred or two for hunting or racing. His sons and daughters go to college; and he himself keeps well abreast of modern developments affecting his industry.

Long before the New Zealand government made it compulsory for dairy factories to use Babcock or Gerber tests for butterfat, and to base their payments on quality, the farmers themselves had established the practice. For they, like the Danes, form co-operative societies which own and control most of the factories. In 1947 the government established the Dairy Products Marketing Commission for the purpose of acquiring and marketing New Zealand butter and cheese abroad. This confirmed the practice, already in operation, of bulk selling from government to government, on the basis of long-term agreements, and with a guaranteed price to the farmer for his product. The Act specifically states (*Please turn to page* 36)

THE Black HORSE

by **JIM KJELGAARD**

Men with years more experience than he had, said that the black horse was bad, a natural killer. But Jed had dreams and ambitions — if he could only get some land he would somehow or other make a living for himself raising horses. So the crippled lad trailed the wild horse through the hills

THE July sun was hot, and the mountain was high. Jed Hale brushed the perspiration from his forehead as he mounted over the top. The coil of rope that was wrapped around his middle started to chafe. Jed unwrapped it and threw it on the ground while he sat down to rest.

He chewed thoughtfully on a straw, and gazed down on the range of low hills that stretched as far as he could see. The big saucerlike hoofmarks of the horse led down, but there was no particular hurry. The horse was not travelling fast. A man on foot, if he had two good legs, could see him as many times a day as he chose. But the horse could not be caught. Jed had known that when he began.

After an hour, Jed rose to his feet, and at the limping hobble that was his fastest pace, started down the hill on the trail of the horse. If he could bring him back with him, something that 15 men, each mounted on a good saddle horse, had not been able to do, he would get $500. Raglan would pay that much for the black horse.

Jed had seen the black horse scatter Raglan's men. After two days of constant chasing, they had finally run him into the stout log corral that they had built. The corral had been strong enough to hold any ordinary animal, but the black horse had crashed through it as though it had been matchwood, when they tried to put a rope on him. The man on the wiry saddle pony who had roped the horse as he ran, had barely escaped with his life. The pony had been dragged along for 50 yards, and would have been killed if the saddle-girth had not broken. The black horse had rid himself of the rope in some fashion. It had not been on him when Jed caught up with him.

Jed's crippled leg gave him trouble going downhill. He was glad when he passed the summits of the low hills and descended into the valley where it was level. There was a stream in the valley. Jed drank, and ate his fill of the ripe raspberries that hung over the water. He had no money to buy supplies to bring along. But he needn't starve. More than once he had lived off the country.

A mile down the valley, he found the black horse. It stood with its head in the shade of a tree, swishing the flies away with its tail. Noiselessly, Jed sank behind a patch of brush, and for four hours lost himself in staring.

It was the biggest and most magnificent horse Jed had ever seen. He knew horses. Product of a wastrel mother and an unknown father, victim of paralysis in his childhood, he had spent all his life doing chores for Raglan and other stockmen in the hills. He had never earned more than $10 a month, but he had dreams and ambitions. If he could only get ten acres of land for himself, he would somehow or other procure a mare, and make a living raising horses. That, for Jed, would be all he wanted of happiness.

THE hill men said that nobody could capture that horse, nothing could tame it. Every man in the hills had tried. The black horse wasn't fast. Three riders besides Raglan's men had had their ropes on him, two of them had had their lassos broken, and the third had cut his rather than risk having his saddle horse dragged to death. Jed looked at the manila rope that he had again looped around his waist, and shook his head. It was the best and strongest rope to be had, but it would not hold the black horse. Still—Raglan offered $500.

Dusk fell. The black horse moved lazily out of the shade of the tree to begin cropping at the rich grass that grew along the creek. For another half-hour, Jed watched him. When Jed was near the horse, he was not Jed Hale, crippled chore-boy and roustabout. In some mysterious way, he borrowed from the horse's boundless vitality. When the horse grazed too close to him, and there was danger of his being discovered, Jed slipped out of his hiding place and moved a half-mile up the valley. There, under the side of a mossy log, he made his bed for the night.

With sun-up, he rolled from under the log. He had slept well enough, and he was not tired, but even the summer nights were chilly in the hills. As briskly as he could, he set off down the valley to where he had last seen the horse.

The black horse was browsing peacefully in the center of a patch of wild grass that grew along the creek. For all the world, he might have been one of Raglan's Percherons, grazing in his home pasture. But the black horse was bigger than any Percheron that Raglan owned. There was another difference, too, a subtle one not to be noticed by the casual eye. When grazing, the black horse raised his head at least once every minute to look about him. It was the mark of the wild thing that must be aware of danger; no tame horse did that.

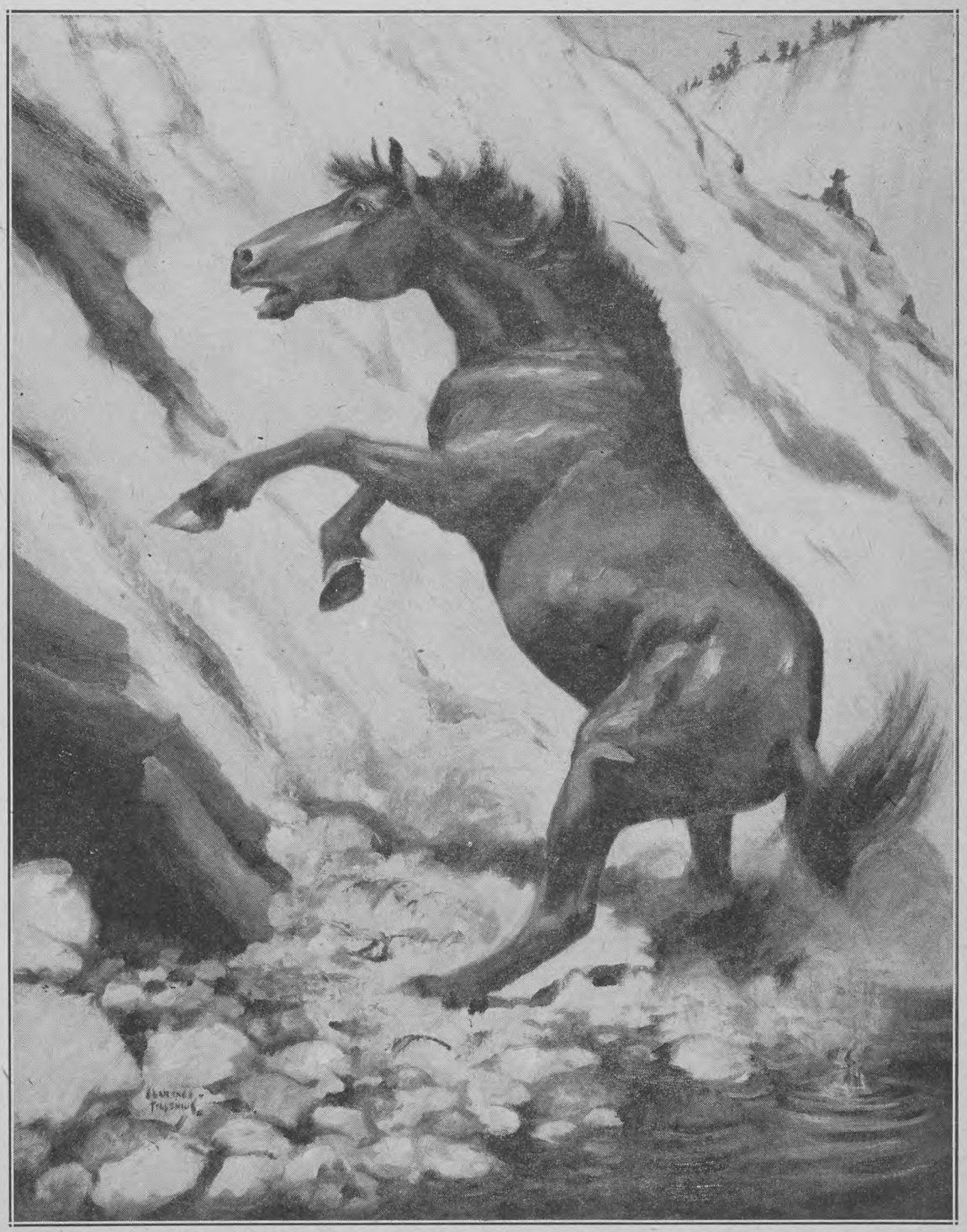
For a quarter of an hour, Jed studied him from the shelter of some aspen trees. Then, as slowly as he could walk, he went into the little field where the horse grazed. As soon as he left the shelter of the trees, the horse stopped grazing, and looked at him steadily. Jed's pulse pounded, the vein in his temple throbbed. Men with years more experience than he had said the horse was bad—a natural killer.

Recklessly, Jed walked on. He came to within 50 feet of the horse. It made a nervous little start, and trotted a few steps. Jed paused to make soothing noises with his mouth. The rope he had been carrying he threw to the ground. Two yards farther on, the horse stopped, and swung his head to look at the crippled man. Jed advanced another 20 feet.

The black horse swung about. There was no fear in him, but neither was there any viciousness. His ears tipped forward, not back. His eyes betrayed only a lively curiosity toward this creature that followed him so persistently.

In low tones that scarcely carried across the few feet that separated them, Jed talked to the horse. Still talking, (*Please turn to page* 39)

Illustrated by Clarence Tillenius



At a blasting neigh of terror from the horse, Jed crawled to the ledge and looked over.

Politics and Economics in B.C.

As British Columbia enters the fall of the year it is faced with strikes in the lumber industry, a shrunken market for the salmon catch, and an unstable government

by **CHAS. L. SHAW**

THIS, to paraphrase the poet, has been the summer of our discontent in British Columbia. The province has been torn with industrial and political strife since spring and as this is written the future is still clouded with uncertainty.

The situation seems strangely paradoxical because if ever a region seemed to be favored by fortune it is British Columbia in this year 1952. Expansion in business and industry has been rapid and consistent; employment has been at an extremely high level despite an increase in population of more than 40 per cent in the past decade, and everyone seems to have more money.

Yet the province's major source of revenue—the forest industry—is in a state of paralysis as a result of disagreement between the loggers', sawmill and plywood plant workers' union and the employing operators. The construction trades have similarly been idle because of wage disputes, and several other groups have threatened to quit their jobs unless their grievances have been met.

Commercial fishermen rather reluctantly went fishing for sockeye salmon when the season opened, but they told the cannerymen that unless they were paid a higher price for their catch they would cease fishing late in July and the canners could shut down their plants for all they cared. Actually, the canners might not care a great deal themselves because their warehouses are jammed with canned salmon left over unsold from last year's pack—an almost unprecedented situation. As this is written, more than 600,000 cases of British Columbia salmon await buyers and in a desperate effort to move the stuff off the shelves the packers recently slashed prices, but even then they face an extremely difficult marketing problem.

One of the reasons for the fishing industry's predicament is that the United Kingdom isn't buying; hasn't got the dollars. For more than a dozen years Britain has been buying at least 300,000 cases of B.C. canned salmon annually; sometimes, as during the war, Britain bought the bulk of the pack—a million cases or more. No wonder the sudden withdrawal of Britain from the list of buyers has put the canning industry into a tailspin. The other British Commonwealth countries are not buying either.

Disappearance of the British market has been a major factor in the forest industry trouble, too, and it's all tied up with the baffling question of exchange. The United Kingdom has found it cannot afford to buy B.C. lumber any more than she can afford B.C. canned salmon; instead she is buying in the Baltic countries which have encouraged this trend by slashing prices. The C.C.F. claims that the B.C. industry overcharged Britain and that Britain has "soured" on B.C. as a result, but this is denied.

In the circumstances, with overseas markets in such precarious condition, it might seem that the strike in the forest industries which has thrown 32,000 men out of work and cost some $10,000,000 in lost wages already, was badly timed. The operators claim that it was, of course, and they say, as do the canners, that much as they regret to see all the production suspended, they would deplore the situation much more if there happened to be an eager and high-priced market for everything they could produce. Such a situation did prevail for several years up to now, but today, as we have pointed out, there is an actual surplus of production. A prolonged strike would probably cause more harm to the strikers than to the employing group.

Nevertheless, no one likes to see an industry tied up by labor or any other kind of controversy. It is bad for the whole economy; stores are complaining that business has slumped 30 per cent since the strike, and bitterness is rising on both sides of the argument.

IT seems as though restoration of industrial harmony will be one of the first objectives of the new Social Credit government which British Columbia has inherited from its recent election. The result of this contest amazed everyone but the Social Crediters who were predicting victory from the outset of the campaign, even though members of the old parties treated them with scorn. Social Credit was something to laugh at in British Columbia during the days of Aberhart, and when John Hart was premier of the west coast province he was

Early stonework blends attractively into quiet country landscapes.

eulogized for maintaining an orthodox financial administration and demonstrating that he would have nothing to do with the "funny money" doctrines of Alberta's economic and political prophets. However, all this is changed now and while the Social Credit government will probably move cautiously toward implementing any of their basic money policies, British Columbians have to recognize that Social Crediters won more seats than any other party. However, their hold is a tenuous one. They have 19 members in the new legislature, with the C.C.F. right behind with 18, Liberals with six, Conservatives with four and Labor with the seemingly unbeatable Tom Uphill, who has been returned from the Fernie coal mine country since the days of "Honest John" Oliver and Billy Bowser.

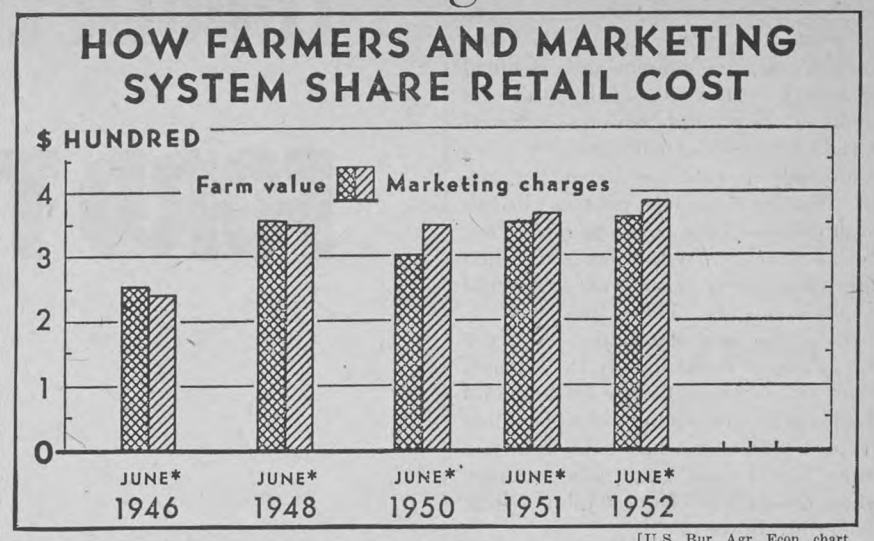
THIS means that Social Credit will be unable to do much without backing from some other group, and since the C.C.F. again finds itself as the official opposition and is traditionally opposed to many of the precepts of Social Credit, this needed support for the numerically strongest party will have to come from Liberals or Conservatives. In the last analysis, therefore, the old-line parties may find themselves in the driver's seat again since they will hold control over the legislative voting. However, they will be without their old leaders, both Premier Johnson and Tory leader Anscomb having been defeated. As a matter of fact, the new legislature is singularly devoid of experienced lawmakers. The Social Credit group boasts only two members with previous legislative training. Harold Winch and his C.C.F. will provide most of the practical knowledge of House procedure. Most of the cabinet posts unfortunately will have to go to men who are serving their first year in public life and are totally lacking in administrative know-how. But the new government will have youth, optimism, and an almost fanatical dedication to the cause of efficient service on its side, and everyone will be anxious to see that it has a fair trial. Nevertheless, with strength so divided in the House it seems doubtful whether the province will be able to carry on very long without another election.

One probable result of the election is a closer working arrangement between British Columbia and Alberta. Leaders of the Alberta government played an important part in the Social Credit victory in B.C., but the party wisely decided against adopting an Albertan as leader or prospective premier. Social Crediters were particularly strong in the farm ridings of British Columbia, which might be taken as an indication that agriculture will receive a more generous deal than it has in the past.

Certainly, the farmers have an abundance of grievances in British Columbia and one of them, of course, is that they have been caught in a squeeze between rising costs and such stiff competition in the market that they are unable to price their product at a level sufficiently high to afford a reasonable margin of profit.

The new government plans to launch a series of inquiries into various phases of provincial activity, and it is probable that the plight of agriculture will receive early attention.

News of Agriculture



[U.S. Bur. Agr. Econ. chart

How the U.S. farmer's share of the consumer's price has dropped with the rising prices of the last three years is indicated in this chart.

The Farmer's Share

WHEN the consumers of food in Canada spend $3.5 billion for food in one year, they are paying not only the retailer from whom they make their purchases, but through him the wholesaler, the railroads, truckers, canners, meat packers, and all others who stand between the producer and the consumer, including the many manufacturers who have a part in preparing food for the market and presenting it in attractive form. In addition, there is storage of food so that a surplus at one moment may become, in fact, a reserve for the continuous and orderly supply of the market.

Payments all along the line are used, in the long run, says the Canada Department of Agriculture, for wages and salaries, interest on investment, overhead costs on plant and equipment, power, and raw materials. The farmer is interested in the raw materials item, because his production is the raw material of the consumer's food.

A recent study by the Economics Division of the department had to do with nine selected commodities: flour, white bread, beef, eggs, fluid milk, butter, cheese, potatoes and canned tomatoes; and it covered the years 1935-51. The study shows wide variation in the farm share of the retail price of these commodities. The table shows a much higher percentage of the consumer's dollar reaching the farmer for eggs and creamery butter than for beef and potatoes, over the years; but a definitely higher percentage for these products, nevertheless, than for cheese and wheat flour, while when the consumer spends $1 for white bread, the farmer's share is substantially less than for any of the other eight commodities. In 1951, for example, the farmer's share of these commodities was as follows: eggs, 76.8; creamery butter, 72.3; commercial quality beef, 68.2; fluid milk and potatoes, 51.7; wheat flour, 39.4; cheese, 34.5; canned tomatoes, 16.9; and white bread, 15 per cent.

British Meat Agreements

BRITAIN has long-term meat agreements with New Zealand and Australia. In addition, a one-year agreement with Argentina expired in April, 1952, with further trade discussions to come. Moreover, Britain and New Zealand have co-operated with Canada in assisting us to circumvent some of the difficulties created by the outbreaks of foot-and-mouth disease.

The New Zealand 15-year agreement was announced on February 17 of this year. New Zealand had a prewar average export to Britain of 260,000 tons, which was increased to 315,000 tons during 1945-47. A meat agreement signed in 1948 remains in force until September 30, 1955, and under this agreement New Zealand promised a further substantial increase, as a result of which 380,000 tons may be exported to the U.K. this year.

Since these long-term agreements are designed primarily to guarantee Britain's meat supply and to encourage the production of meat for the British market in New Zealand and Australia, new fertilizer factories, new cold storage plants and increased transport and port facilities are being provided in New Zealand. In addition to which, a national campaign is beginning for the application of fertilizers to hill pastures from the air. Consequently, to assure a market which would justify these steps, the U.K. undertook to buy or permit the sale of New Zealand surplus beef, veal, lamb and mutton, without restriction of quantity, for 15 years, from October 1, 1952.

The National Farmers' Union of England and Wales says that it is not clear whether Britain guarantees an unlimited market for New Zealand meat after September, 1955, or whether the quantity is to be governed by consumer demand under free market conditions. It is stated that the increase in beef prices will bring average quality steer and heifer beef from New Zealand into line with prices to be paid Australia for the current year. Lamb and mutton prices have been increased, and pork prices and the stimulation of hog production are under discussion.

The Australian 15-year agreement was signed October 11, 1951, and took effect July, 1952. It involves plans for increased production in Australia, with the prospect of long-time security for producers. To this end, actual prices paid to producers will vary from year to year, and will be based on costs of production and other considerations. It is provided that if the handling of Australian meat is returned to private trade by the U.K. government, both governments will jointly make arrangements which will

enable them to meet their obligations under the agreement.

U.S. Price Supports Fixed

JUST prior to the Democratic Convention at Chicago in July, President Truman signed a bill passed by Congress which required that support prices for cotton, wheat, corn, rice and peanuts must be continued at 90 per cent of parity to the end of 1954. It abolishes the sliding scale established in the 1949 Agriculture Act, which permitted prices to be supported at from 75 to 90 per cent of parity.

Death Takes John G. Rayner

FEW men who have worked on behalf of agriculture, from the university centers of western Canada, have become more widely and favorably known than the late Professor John G. Rayner, for 32 years director of the Extension Department, University of Saskatchewan. Born in England on October 1, 1890, he came to Canada and was graduated from the University of Manitoba in 1913, working for the following year as a part-time extension worker in Manitoba. In 1914, he joined the Saskatchewan Department of Agriculture as a district representative, and became assistant director of extension in 1918. He was appointed to the position he held for so long, on March 1, 1920.

The late Professor John G. Rayner.

His meritorious service to Canadian agriculture was recognized some years ago when he was made a Fellow of the Agricultural Institute of Canada. He was twice president of the Canadian Council on Boys' and Girls' Club work, and his many friends and others who held him in high esteem will agree with the words of Dr. V. E. Graham, dean of agriculture, University of Saskatchewan, when he said that the late Professor Rayner "was closely identified with every progressive movement in the field of agricultural development which had an extensive aspect" and that he had "devoted his entire adult life and every ounce of his great mental power and physical energy to one cause—the improvement of agricultural practice and a more abundant life for the farmer and his family."

During his long period of service at the university, he was associated as an officer or member of many organizations for the forwarding of agricultural welfare; and in his private capacity as a citizen of Saskatoon he likewise served his community.

Co-op Plant Leased

THE co-operative processing plant at Swift Current, Saskatchewan, owned by Canadian Co-operative Processors' Limited, including the processing plant at Edmonton operated by the co-op, has been leased to the Quaker Oats Company, Chicago. During the past seven years, the plant has been used for the processing of surplus horses from the prairie provinces to the number of approximately 240,000. Now owned by 36,400 farmer-members, the plant is believed to have largely served its original purpose.

The Quaker Oats Company will operate through a subsidiary, the Alsask Packing Company, and will continue to process horses, not only for the export trade, but for the pet food trade in Canada and the United States.

Rural Electrification

ABOUT 16 years ago, the U.S. government established the Rural Electrification Administration in the Department of Agriculture. It was created in order to promote rural electrification of U.S. farms by wisely lending money for this purpose, on an interest-bearing, self-liquidating basis. Rural electrification associations were encouraged and, on the basis of funds borrowed from R.E.A., the number of U.S. farms electrified has increased from 744,000, or about 11 per cent of the total on January 1, 1935, to 4,529,600, or 84 per cent of the total, on June 30, 1951.

In all, more than $2,850,000,000 has been lent to 1,076 borrowers, including 925 rural electric co-operatives, which have borrowed 95 per cent of the total, and have built more than 1.1 million miles of line. During all this period, only one borrower, operating a small commercial utility which was wrecked by a storm, has had to be foreclosed; and of the total amount of money lent, only $40,000 has been lost. Moreover, by March 31, 1951, more than $282 million had been returned to the government in principal and interest, with less than 3/10 of one per cent of the amounts due being more than 30 days overdue.

Get It at a Glance

Condensed items about agriculture and the farm from Canada and elsewhere

A WORLD record price for a merino ram at auction was set at Sydney, Australia, during the first week of June, when 4,200 guineas were received by the Bundemar Estate. "The Land" says that the highest authenticated price for an Australian merino ram is 5,000 guineas, paid privately.

* * *

THERE are now 23 veterinary service district boards operating in Saskatchewan, which cover about 85 municipalities. Four district boards began operating recently at Whitewood, Earl Grey, Elfros and Abernethy.

* * *

THE next meeting of the International Wheat Council, to discuss renewal of the International Wheat Agreement, is to be held in Washington, beginning January 12, 1953.

* * *

DURING 1951, the Central Alberta Dairy Pool, with headquarters at Red Deer, did more than $6.5 million worth of business, purchasing over 4.9 million pounds of butterfat, 470,000 pounds of poultry, 162,000 pounds of honey, and over one million dozen eggs. It has 19 plants in operation, is 27 years old, and last year secured a surplus of $179,000.

* * *

CANADA had 399,686 tractors on Canadian farms in 1951, of which 236,930 were in the prairie provinces. This figure compares with 283,000 tractors of ten H.P. and over in England and Wales last year.

* * *

THE highest price ever paid for a lamb at Calgary was reported from the Alberta Sheep Breeders' Sale on July 6, when an Iowa buyer paid $1,050 for a ram consigned by P. J. Rock and Son, Drumheller, Alberta.

* * *

DUPLICATE, the miracle British hen, which was reported to have laid 360 eggs in 156 days, has been X-rayed by the British Ministry of Agriculture. She was believed to have had two oviducts, but the X-ray did not confirm this. Latest report gives her 409 eggs in 218 days.

UNDER a Saskatchewan Department of Agriculture policy, purebred Yorkshire boars are purchased by the department and sold to rural municipalities and local improvement districts at $50 each, delivered, losses being shared equally by the federal and provincial governments. Last year, 77 R.M.'s and L.I.D.'s bought 209 boars. Such boars must be available always for public use, at a fee which will just cover the cost of maintenance.

* * *

A CHAMPION fat steer at the recent Royal Agricultural Society Show held at Sydney, Australia, sold for £A160. He weighed 1,730 pounds, was reported to have been in perfect condition, winning among 280 entries.

* * *

DURING the crop year 1950-51 in the United States, a record quantity of 20,998,740 tons of fertilizer were consumed, which compares with about 7.5 million tons average for 1935-39. Illinois alone used more than a million tons.

* * *

IN 1951, the Alberta Livestock Co-operative did business to the amount of $36,026,786. This was principally the value of livestock marketed for members, for which the co-operative received less than one-half of one per cent to cover all operating expenses.

* * *

AS at the end of April, the Dominion Bureau of Statistics composite price index of commodities and services used by farmers, including farm family living costs, had advanced 4.8 per cent above the figure of a year ago. Between January and April of this year, the seasonal advance in farm wages created a rise of 26.7 per cent in western Canada to 484.6, while the eastern index rose only .7 per cent to 432.8. During the January-April period, in addition to wages, items which registered increases included equipment and materials, farm machinery, gasoline, fertilizer, and hardware, while decreases were registered with farm family living costs, building materials, feed and seed.

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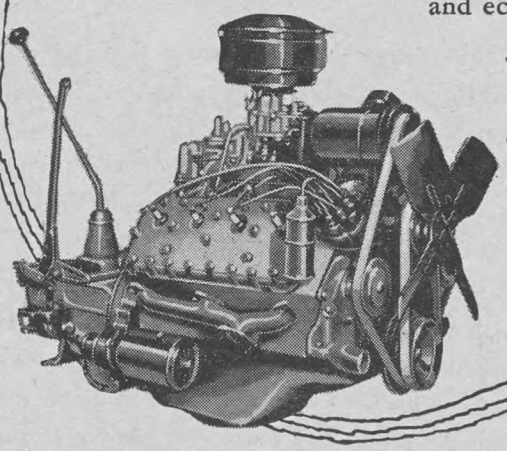

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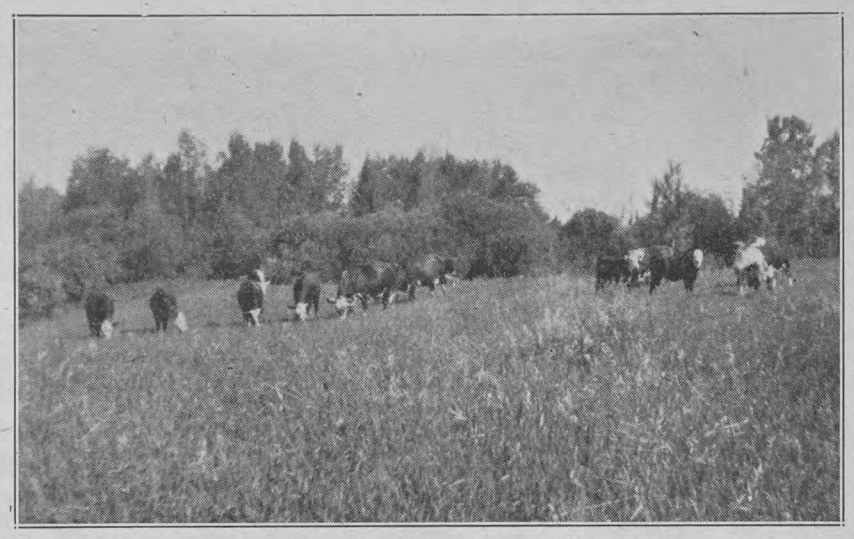


These Herefords, grazing so comfortably, belong to Robert Wilson, Salt Prairie, Alberta.

Livestock Prices

THAT not all of the decline in the prices of cattle and hogs since the foot-and-mouth outbreak in February is chargeable to that catastrophe, ought to be more widely understood than it apparently is. In this connection, a timely note is included in the April-May Monthly Letter of the Canadian Meat Packers. The letter says, in part:

"With the possible exception of the foot-and-mouth outbreak, the fact of greatest significance in the 1952 meat picture, to date, has been the very substantial increase in pork supplies . . . Well before the disease outbreak in Saskatchewan . . . prospects of an impending pork surplus were looming. The 1951 fall runs indicated a sizable increase in the previous spring pig crop.

"From February through April, hog marketings continued at an even higher level than previously anticipated, exceeding the same period of 1951 by one-third or more. This fact in itself would almost certainly have resulted in prices remaining at the floor level . . . (but) . . . mid-April hog prices in Canada compared more favorably with those a year ago than did hog prices in the United States.

"In the case of beef, however, the loss of the United States market outlet has been a much more damaging blow . . . A year ago . . . shipments to the U.S. in the first four months included 63,532 head of live cattle for slaughter, 3,677 calves and 11.4 million pounds of dressed beef and veal, plus 19,451 head of dairy and purebred cattle exported. This year, up to the imposition of the embargo on February 25, only 5,443 beef cattle, 555 calves, 7,199 dairy and purebred cattle, and 1.9 million pounds of dressed beef and veal have been shipped south of the border."

Fly Killing Method

CORNELL UNIVERSITY in New York State is trying a new method of applying insecticides to dairy buildings, to avoid milk contamination and to reduce the labor and cost of fly control. The new method is a type of spot treatment, by which three-quarter-inch strips of galvanized screen wire are dipped in a concentrated fly-killer, and then fastened to the barn ceiling. The strips are dipped and dried outside the barn.

The results of these tests indicated that, whether dieldrin, chlordane, toxaphene or lindane were used, 80 per cent of the flies were killed within 24 hours of the time the strips were applied. Over the season, the strip method only required half as much insecticide as did an over-all spray. A 15 per cent dieldrin concentrate provided satisfactory control for 16 weeks. A similar concentration of chlordane, toxaphene or lindane gave effective control from four-and-one-half to nine weeks. There was no contamination of milk in eight barns where lindane was used. Another important fact was that proper clean-up and waste disposal around the barn lengthened the period of fly control by two or three times.

About Antibiotics

"ANTIBIOTICS have been known for a long time, but their use in feeds began only about 1949," said Dr. L. E. Stephenson of the University of Arkansas, to the recent Ontario Poultry and Livestock Conference, held at the Ontario Agricultural College, Guelph, early in July.

Antibiotics vary in the response they secure from pigs, and at the University of Arkansas the examination of the intestinal contents of different lots of pigs fed penicillin, terramycin and aureomycin indicated that the last two groups gave more response to feed.

No theory of antibiotic action seems to be well established. One which has gained some support is that antibiotics control harmful microorganisms in the intestines of the animal. "Some people claim," said Dr. Stephenson, "that there is no such thing as a well pig—some are just sicker than others."

Work so far done with antibiotics indicates that the best antibiotic to use will depend on the job to be done—that is, on which organism needs to be controlled. Different regions may present different organisms to interfere with growth, or hold back rates of gain. The age of the animal will also influence its response to antibiotics. In Arkansas, the greatest response was secured from baby pigs prior to weaning. Of 243 spring pigs, of which four were used as checks, the remaining 239 in which bacitracin was implanted as a pellet, made an average gain of 11 per cent over the check pigs, when only one pellet was used.

"The response to antibiotics," said Dr. Stephenson, "can be considerably affected also by breeding." It was his experience that by far the greatest

gains had been secured from cross-bred animals. Inbred animals responded least significantly.

Shade for White Hogs

THE principal objection to white hogs has always been that they are inclined to blister in the heat. It is believed that sunburn is most likely to occur when the hogs are pasturing on certain plants such as rape, which is believed to cause a skin sensitivity allergy. This seems to develop only while rape is damp with dew, so that it is safer to run pigs on rape only in the afternoons.

Authorities in the Swine Division, University of Illinois, believe that sun shades for pigs will make for efficient gains and healthier animals. It is probably true that not as many hogs are lost in the prairie provinces because of overheating and lack of shade, as in areas farther south, but it is reasonable to expect that pigs will make greater gains when they are more comfortable.

No expensive or elaborate provisions need be made. Common posts, supporting a pole framework with brush, straw or other material on top, make a sufficient shade. Any coarse hay will do excellently, and if it is placed on top of the sun shade while green, it settles down, and will not only remain all summer, but will permit the rain to drip through and help control the dust. The posts should clear the ground at least five feet, to allow adequate air circulation, and, as hogs approach market weights, they need ten to 15 square feet of space per head.

Bloat of Livestock

MANY institutions have tried to analyze the specific causes of bloat, but so far without much satisfaction. In a number of instances, cattle have been divided into small lots and treated in different ways, but no one seems yet to have arrived at the answer. On the other hand, some cattle raisers are able to go along for years without losing an animal, or having a serious case of bloat, even when they are using legume pastures.

It is when legumes are introduced into pastures that the trouble is likely to begin. Cases of bloat are accentuated by the fact that some animals are "bloaters," while others are not. A series of experiments have been reported from Mississippi which were conducted with animals which were known bloaters.

In these tests, ladino clover and tall fescue, alone and in mixtures, were used. The ladino, sprayed and unsprayed with 2,4-D and fertilized and unfertilized was carefully checked. Feeding and management practices were varied to include feeding five pounds of grain per animal per day, hay fed off the pasture, or on the pasture, and at various times. Minerals alone, and minerals and yeast, were fed; and they also tried withholding feed.

Feeding five pounds of hay per animal in the morning reduced the number of bloat cases in the forenoon, but did not protect them in the afternoon. Eating hay freely before grazing reduced the amount of forage consumed. When hay was fed on the pasture, not all animals would eat enough hay to protect them from bloat. If the animals were fed dry hay or grain twice a day, it was concluded that there would probably be little or no bloat on clover pasture. Animals held in a dry lot overnight and grazed in the morning, bloat more severely in the afternoon than if held until noon and turned out to graze. Cool weather reduces bloat hazard, and most severe cases occur on hot sunny afternoons. Dew or rain had little effect; animals on wet pastures bloated no worse than those held off until the forage was dry. Close grazing lessens but does not eliminate bloat.

When animals were hand-fed clipped ladino clover, as little as 12 pounds of clover caused bloat.

The Mississippi researchers concluded that the practical answer to bloat control is to use a grass-clover pasture which is at least 50 per cent grass by weight. Care must be taken not to overgraze early in the spring, or the grass percentage will be reduced. The difficulty is to maintain the grass in sufficient proportion, which means judicious grazing and careful use of nitrogen fertilizer in the spring.

Sulphur Diet for Wool

AMINO acids are indispensable constituents of wool. Sulphur is a constituent of amino acids. Therefore, sulphur is an indispensable constituent of wool.

This syllogism is the basis of some wool research under way at the Lethbridge experimental station. In the process of overcoming the effects of a low protein diet, sulphur was fed which had been made radioactive, so that its progress through the body of the sheep could be traced, and particularly its ability to reach the wool. A report of the results indicates that even the wool of lambs, born of ewes which were used in the experiment, showed a noticeable degree of radioactivity.

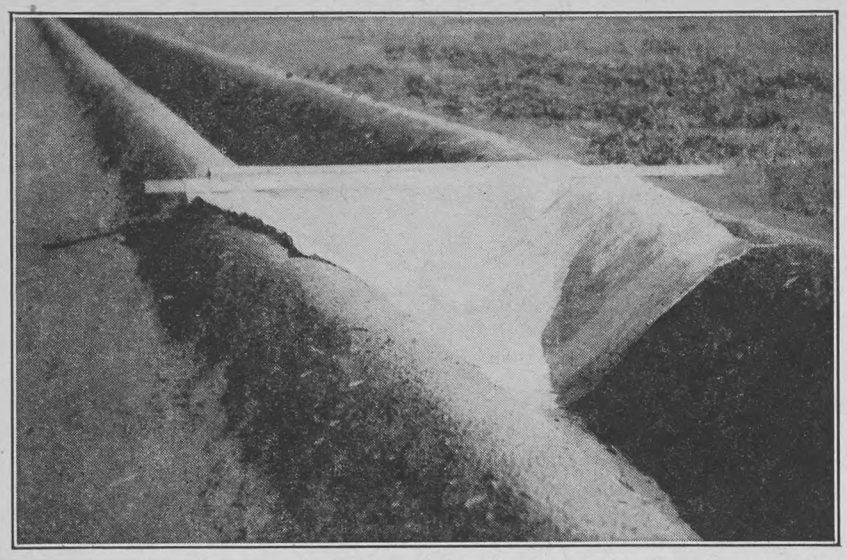
Provided sheep which would otherwise have to subsist on a low protein diet are given supplementary amounts of urea and inorganic sulphur compounds, neither the quality nor the quantity of wool need suffer, the Lethbridge results show. Animals do not have the ability to produce amino acids containing sulphur, but depend on plants for a supply of these essential chemical compounds. Nevertheless, bacteria which are present in the rumen of some animals do produce amino acids. In this experiment, when sulphur was provided in the diet of the sheep, some strains of rumen bacteria were able to produce the essential amino acids which were then absorbed by the sheep, and used among other purposes for growing wool.

Livestock Wounds

THE U. S. Department of Agriculture has developed a new treatment for wounds involved in castrating, dehorning and branding. It is known as EQ 355, and is considered to be the most effective screwworm remedy for infested sheep.

The formula for EQ 355 by weight is: three parts lindane, 30 parts pine oil, 42 parts white mineral oil, ten parts of an emulsifier, and ten parts of silica jel. The superiority of this wound treatment derives from the fact that it will not deteriorate upon standing, one application usually lasts for seven days, and wounds treated with the new remedy heal quickly.

FIELD



Canvas dam in place in an irrigation ditch. The dam will raise the water level and cause the ditch to overflow for gravity irrigation.

The Pick-up Reel

FOR handling grain which has become lodged, tangled, flattened, by heavy growth, storms or snow, H. A. Lewis, Department of Agricultural Engineering, University of Saskatchewan, recommends the pick-up reel. This will lift most of the down grain so that it can be cut by the cutting bar and delivered on the table.

"The pick-up reel," says Mr. Lewis, "is a complete assembly which takes the place of a standard reel on the combine. It consists of a reel shaft, special support arms, reel batts equipped with combing fingers, and a system of cams and levers which control the action of the combing fingers. When in operation, it provides a combing and lifting action in the down grain, raising it so that it may be cut in the normal manner."

Three adjustments of the pick-up reel will be aids to maximum efficiency. The speed of the reel should be slightly faster than the standard reel, but will of course vary with the condition of the grain. The reel support arms need to be lowered so the fingers on the pick-up reel can comb the down grain. Also, the reel should be moved forward on the support arms far enough so that it will reach into the down grain and comb it back over the cutting bar.

Alfalfa Management

THE Swift Current Experiment Station warns that while alfalfa is an excellent forage crop and one of the hardiest, it needs careful management to keep it productive over a period of years. Some experiments conducted on irrigated land involved taking two and three cuttings after early and late flowering stages, with sharply differing results.

When alfalfa was cut three times each season at the bud stage of growth, a high yield was obtained, but considerable killing-out occurred during the following winter, and the yield the next season was very low. During the second winter following, the winter stand killed-out completely. When two cuttings were taken at the late flowering stage of growth, some killing also occurred during the winter, in addition to which the hay was of poorer quality because of greater maturity. Where two cuttings were taken at the early flowering stage (one-tenth to one-quarter in flower), no winter injury resulted, and high quality feed was obtained. "Over a two-year period," the station reports, "its yield was equal to three cuttings, and was greater than that from two cuttings taken at the late flowering stage. Further, a productive stand was maintained."

Alfalfa cut at the late flowering stage was harvested early in September, whereas when cut in the early flowering stage, the cutting was done on August 10. Since winter-killing followed the last cutting in early September, alfalfa should be cut earlier to allow the plants time after harvest, and before killing frosts occur, to develop sufficient top growth so that an abundance of plant food can be stored to permit the plant to live over winter.

Crop Inspection

CROP inspection is an essential part of the maintenance of pure varieties in commercial quantities. Registered and certified seeds, for example, are roughly of two different degrees of purity of variety, and both originate from original seed stocks produced by plant breeders. To keep these seed stocks pure, growers of registered and certified seed must meet exacting standards as to purity, and these can only be maintained by a close examination of the growing crop.

Growers of registered and certified seed are required to take all precautions to prevent deterioration of the seed they multiply. Moreover, it is their responsibility to apply to the Plant Products Division of the Canada Department of Agriculture for crop inspection. The inspectors will then determine whether the crops have been grown on clean land, have been properly isolated from other crops of the same kind, and whether the implements and storage facilities used have been thoroughly cleaned.

The inspectors record the pedigree of the seed in their reports, and note other factors such as disease, insects, weeds, and the nature of the previous crop. They base their determination of the purity of the variety on six areas of each field, of 1/50 acre each. Also they record the number of plants which do not conform to the official description of the variety, and discard these off-types.

Efficiency from Combines

GETTING the maximum capacity and efficiency from the combine is largely a matter of reducing the opportunities for grain losses by the machine. Capacity is limited by the ability of the combine to thresh and separate grain; and efficiency is a combination of the operation of the cutter bar and a proper adjustment of the threshing and separating apparatus.

Losses of grain occur at the cutter bar and at the cylinder, rack and shoe. Cutter bar losses are usually greatest, according to M. E. Dodds, Experimental Station, Swift Current. The least loss occurs at the cylinder. Combine studies reported by the Lethbridge station indicate that losses may run as high as four or five bushels per acre, which, leaving out cutter bar losses, occur about 14.2 per cent at the cylinder, 43.3 per cent over the rack, and 42.5 per cent over the shoe. Lethbridge officials suggest that the total loss may often be reduced by increasing the cylinder clearance and by reducing the forward ground speed to prevent overloading of the machine. Correct adjustments of the reel and table height are necessary to avoid slopping at the knife. Using a speed counter to check cylinder speeds, and keeping concave clearances no closer than necessary for good results are advisable. They recommend that manufacturers' specifications as to rack and shoe speed should be followed, with the wind normally directed toward the front of the shoe, in order to float out the chaff.

A. M. Wilson, Field Crops Commissioner, Alberta Department of Agriculture, says that one very noticeable loss in combine or threshing machine operation is the damage to kernels, which lowers the grade, and consequently the value of the crop. Failure to properly adjust the combine or threshing machine, in some years, has meant a loss of as much as 18 cents per bushel in barley. Sometimes, the concaves are set too close to the cylinder, or the cylinder speed is too fast. In some Alberta tests, cylinder speeds of 1,100 revolutions per minute were breaking up to 18 per cent of the kernels: reduction of the speed to 950 rpm reduced damage to almost nothing.

Weeds also reduce combine efficiency. Cutter bar losses are heavier because it may be necessary to raise the bar frequently to clear weeds. An excess of weeds on the rack and shoe also reduces separating efficiency. Many farmers are careless with weed seeds, and allow them to be scattered back on the land. Combines have equipment which allow a collection of weed seeds in a small hopper or bag. These should be ground up and fed to livestock, or burned, and not dumped in the open where they can be scattered by birds, livestock and wind.

Grassy Roadsides May Come

MODERN highway construction now provides for wide sloping ditches, which for the most part may be grassed and kept neat and presentable by mowing. The introduction of 2,4-D makes it possible to kill at least a great many of the weeds which normally grow up along roadsides, and in addition, other chemical sprays are available for killing woody growth and scrub along the highway. Now comes a machine for automatically grassing highway embankments in a single operation.

According to C-I-L Agricultural News, a Quebec horticulturist and engineer has evolved a machine which will blow topsoil, fertilizer, grass seed, oatseed and peat moss onto steep embankments in a single operation. Powered by a gasoline motor, the machine is mounted on a five-ton truck, and will seed from 400 to 600 square yards per hour. Today, it is said, an area of several hundred thousand square yards carries a thick luxurious growth of grass, which was only pulverized shale before the machine was put to use.

Ten days ahead of time, oats are mixed with peat moss and topsoil, by machine, then piled to allow the oats to germinate. When signs of growth are evident, the mixture is fed to a second machine, after adding grass seed, more topsoil, fertilizer and some clover. From the blower truck, it is dropped through a rotary air trap into a long, flexible, air-blower tube which sprays the mixture on the embankment. A watering truck follows, equipped with a long hose and spray nozzle; and several sprinklings at intervals keep the mixture from blowing off until the grass is established.

Another method is reported from Illinois, where two special asphalts have been sprayed on the sloping roadsides or cutbanks after the grass seed is sown, to hold the soil in place until the grass has taken hold. Two different asphalts have been found satisfactory, one an emulsion sold under the trade name of Terolas, and the other a semi-solid asphalt dissolved in a liquid which evaporates when exposed to air for some time. Several grasses, clovers and small grains all came through the thin 1/16 inch coating of asphalt satisfactorily. After a year, the asphalt breaks down.

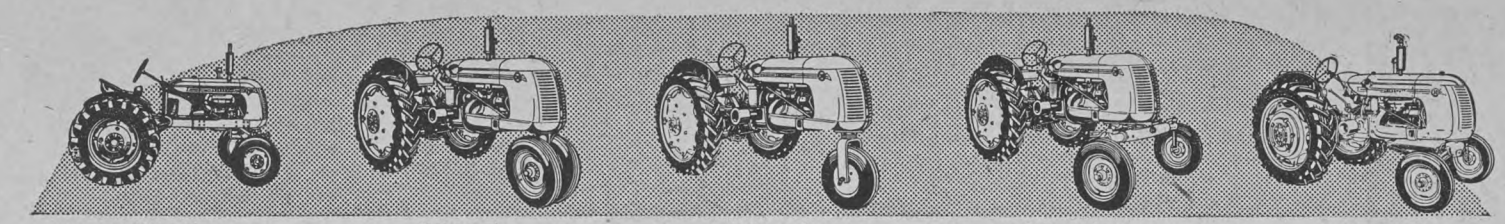
Tartary Buckwheat

ONE Northern Wheat is graded "Rejected" if it contains more than five kernels of Tartary buckwheat to the pound. This weed has become troublesome in some parts of Alberta, and has been found in several places in Manitoba. It would appear that in most instances it is introduced principally by way of contaminated seed grain.

It is an annual weed, growing from two to three feet high, and has roughly triangular leaves, which are often as broad as long. The leaves may be from one inch to four inches long and wide. The plant has small white flowers borne in bunches on the flowering stems, and the seeds are about the size of wheat kernels.

Tartary buckwheat can easily be distinguished from wild buckwheat, which is a much weaker-appearing plant with pale-green, arrow-shaped leaves pointed at the tips, flowers that are greenish or pink in color, and triangular seed which resembles the cultivated rather than the Tartary buckwheat.

The seeds of Tartary buckwheat behave somewhat like those of wild oats. The plant appears to prefer moist and well-drained soil, and is difficult to eradicate. Tillage, as for wild oats, gives less than satisfactory results. 2,4-D does not kill it with any certainty, although a fair measure of control is secured if a fairly heavy application of 2,4-D is made.



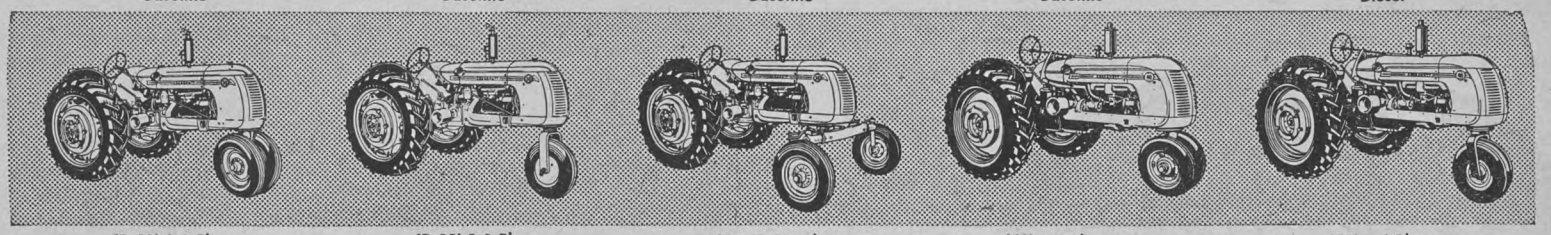
'20' 2 Plow
Adjustable Front Axle
Gasoline

'30' 2-3 Plow
Row Crop
Gasoline

'30' 2-3 Plow
Single Row Crop
Gasoline

'30' 2-3 Plow
Adjustable Front Axle
Gasoline

'D-30' 2-3 Plow
Standard
Diesel



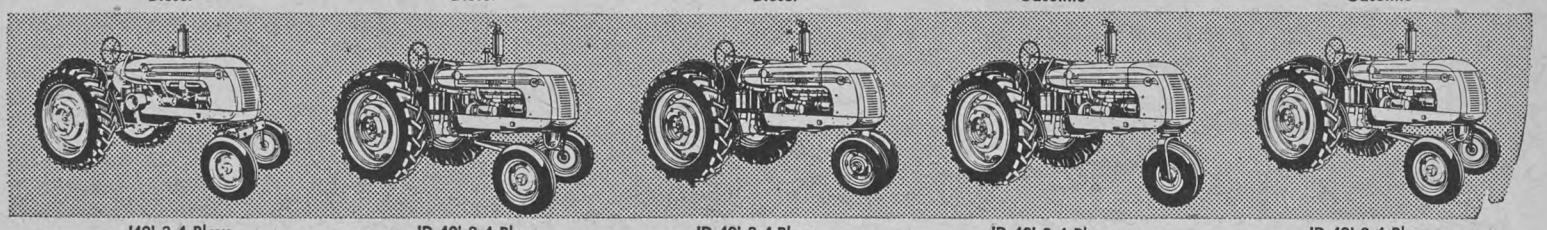
'D-30' 2-3 Plow
Row Crop
Diesel

'D-30' 2-3 Plow
Single Row Crop
Diesel

'D-30' 2-3 Plow
Adjustable Front Axle
Diesel

'40' 3-4 Plow
Row Crop
Gasoline

'40' 3-4 Plow
Single Row Crop
Gasoline



'40' 3-4 Plow
Adjustable Front Axle
Gasoline

'D-40' 3-4 Plow
Standard
Diesel

'D-40' 3-4 Plow
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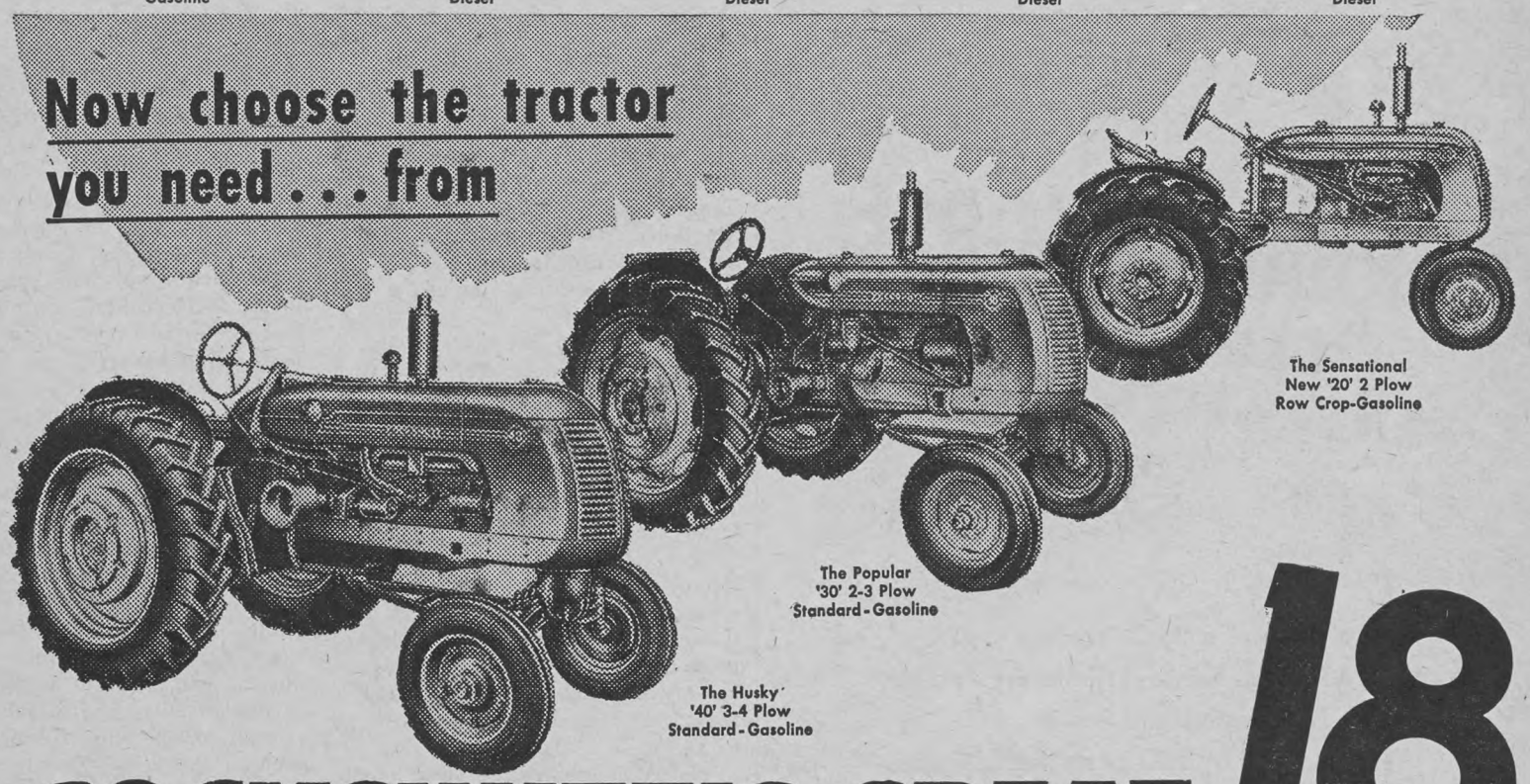

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HORTICULTURE

[National Film Board Photo.

From now until midfall, the sun will be busy painting the cheeks of apples in shining colors, so they may be picked and stored for use throughout the winter and spring.

Morden Vegetable Varieties

BETWEEN 1944 and 1951, eight new hybrid vegetables and varieties have been introduced by the Experimental Station at Morden, Manitoba. Most of these are now in commercial distribution, and all but one were developed during this period.

First was the Morden tomato, a golden-yellow, midseason, bush variety with a mild flavor and ripening about the same time as Bounty. In the trade, it is known as Morden Yellow.

Sugar Prince hybrid sweet corn is large-eared and comparatively early. It seems to have been successful in the home garden, with market gardeners, for freezing and commercial processing. The ears are seven inches or more in length, with 12 to 14 rows of kernels per ear, and the variety is ready at Morden from August 10 to 14.

The Monarch hybrid bush tomato ripens somewhat earlier than Bounty and is attractive. It is a bush tomato, and all branches terminate in a blossom cluster. Total yields at Morden average 12 to 14 pounds per plant, as compared with eight to nine pounds for Bounty and Early Chatham. Fruits are up to 3¼ inches in width, bright red on ripening, and smooth.

The Meteor tomato is a bush variety, bearing exposed fruits on plants which are about nine inches high and 30 inches in spread at Morden. Main stems are strong and thick. The fruit is firm, smooth, brightly colored, with very little surface roughness. Meteor is a few days ahead of Bounty at Morden, and last year carried about 14 pounds of ripe fruit per plant.

The Tiny Tim pea was selected as a dwarf plant mutation, and averages eight inches to ten inches tall. It will resist the effect of high winds while carrying a load of pods, and is not as much affected by dry weather as other varieties. Pods average five peas, pleasantly flavored and sweet. The yield per plant is not as high as Lincoln, but plants can be set closer together, which is an advantage.

The Morden midget cabbage is a dwarf, and early maturing. Its small heads are designed for economical use and resist splitting. Usable heads are cut by July 18 from seeds sown outdoors like radishes. Plants are about eight inches tall and spread is 16 inches to 18 inches.

The Morgold sweet pepper is thick-fleshed, golden-yellow in color, and carries seven to nine per plant. Peppers are about four inches long and are deep glossy green color before turning yellow.

The Mustang bush tomato is early, and yields well. The plants are sturdy and withstand adverse weather. It is a first-generation hybrid, and seed of it should not be saved for planting. Bushes spread to 36 inches, with branches having from five to seven clusters with three to five fruits each, giving an average yield of 14 to 15 pounds of ripe fruit, 3 inches by 3¼ inches. The flesh is meaty, with few seeds.

Grandmother's Garden

by **Annie L. Gaetz**

OLD things become precious because of their hallowed associations and the wealth of memories they recall. So it is with my grandmother's garden.

Grandmother's garden in my childhood days, seemed truly a fairyland, with something new and thrilling at every turn of the path.

Grandmother had, in truth, the green thumb, and things in her garden seemed to grow as if by magic. In later years I have come to realize that she must have spent long hours tickling the earth with a hoe, that it might laugh back with that abundant harvest.

Whenever we visited grandmother, and we visited often in the growing season, we always returned home with our arms full of flowers.

In the early spring there were the June roses, which came into bloom long before that month, covered with small double roses of the most delicate

shade of pink. These roses grew in the corner of the garden, reaching much higher than the picket fence, and the most beautiful blooms always grew on the topmost branches. Perhaps we just thought that, because they were out of reach. We always planned to pick roses early in the morning while they were still wet with dew, so that they would retain their fragrance longer.

A wise gardener, Dean Reginald Hole, once said: "If you want to grow roses, you must have roses in your heart," and I am sure grandmother had lots of roses in her heart, for all sorts of roses thrived in her garden.

Then, there was the highly perfumed climbing honeysuckle, blooming in profusion around the verandah. The delicate blooms intrigued us; but we were obliged to leave off picking them until the dusk of evening. Grandmother kept bees, and we had no desire to dispute ownership with anything that could terminate an argument as speedily and as definitely as the bee. Other disputed flowers were in grandmother's garden; but of the honeysuckle, the bee claimed ownership supreme.

Even yet, I can visualize the quaint, old-fashioned flowers of childhood, the sweet william, larkspur, heartsease, also called "thoughts of you," sweet tom, with its fragrant leaves, and the rows and rows of tall double hollyhocks.

Raspberry Virus Diseases

THE raspberry is a very popular small fruit, and can be grown with more or less success in most parts of western Canada. On the prairies care must be taken to use only hardy varieties and, in severe locations, to cover them for the winter, unless snow cover is ample. They are heavy feeders, and like a rich, moist soil with plenty of organic material in it. The yield is often disappointing in dry areas, because sufficient moisture is not available to plump up the berries and keep them coming during the normal picking season.

Two of the handicaps to raspberry growing are leaf curl and mosaic, the virus diseases which are so damaging to raspberry plantations. The rows should be watched every year for these pernicious enemies. Any plants which show dwarfing, or the yellowing and mottling of leaves, or leaves that curl down and inward, should be taken out immediately, together with any healthy plants and sucker growth, on either side of the infected plants. The plants so removed should be burned and the spaces later on replanted with healthy plants. Unless prompt action is taken, the vigor and productivity of the whole raspberry patch or plantation may be so reduced that it is not worth maintaining.

Blackheart and Die-back

WHAT are called blackheart and die-back of fruit trees are not diseases caused by microorganisms such as cause most plant diseases. Blackheart is very common with apples, and may or may not be accompanied by die-back, or the killing back of branches. In both cases, the cause is lack of hardiness, though in some instances the hardiness may be merely lack of maturity of wood. As the tree goes into winter, this lack of maturity makes the small twigs and branches susceptible to drying out from the cold of winter. It also seems to induce blackheart on occasion, even in varieties which are normally extremely hardy.

Blackheart is exactly what the name suggests. The heartwood and sometimes nearly all of the sapwood in the trunk and branches die and become darkened or black, leaving only a thin circle of living wood surrounding them. Eventually, this dead inner wood may become subject to attack by decay organisms, and eventually a strong wind may blow the tree over.

Die-back is often associated with blackheart, since the underlying causes are the same in both cases. There is no cure for either condition, but means can be taken by the careful grower to minimize the chance of either developing.

First, of course, it is advisable to plant really hardy varieties, and varieties that have been worked on hardy root stocks. Good shelter for the fruit trees helps, since it prevents the drying effect of the sweeping winter winds, and helps to keep the snow among the trees. It is not advisable to force the trees to grow too rapidly, so as to incur the danger of freeze-up arriving before the wood is mature. If orchards are irrigated, late summer and early autumn irrigation should be avoided. If the soil is dry, water can be applied just before freeze-up. In this climate, also, trees are safer from winter injury if they are headed low, so that they can be protected just as much as possible by snow cover. Overbearing also tends to weaken the tree temporarily, which means that the moderate thinning of heavy crops is helpful.

Fall Plant Gooseberries

GOOSEBERRIES start to grow early in the spring, and are better planted in the fall, as a rule. In addition, the leaves drop quite early. This means that the plants may be set in September and reach the winter in good condition. This fruit is a native of Canada, and will grow almost anywhere, although it thrives somewhat better where the summer temperatures are not too high.

A great many people like gooseberries, especially fresh from the bushes, and for jam, but few are fond of the thorns. Most of the older varieties possess thorns, but the Division of Horticulture at the Central Experimental Farm, Ottawa, originated a number of thornless types, which though not entirely thornless, have so few that they do not interfere with picking. One of these, called Captivator, the most impressive to date, is very productive, vigorous, hardy, upright and suckers freely. It has only a few short thorns at the bases of some of the shoots. The berries turn red when ripe, are thick-skinned, and of good quality, and are quite large.

Gooseberries should be set about five feet apart, in rows six feet apart. They should be planted a little deeper than they stood in the nursery rows, and have the soil tramped well about them. Use good one-year-old plants, preferably; trim off all the broken roots; and cut back the plants to from six inches to 12 inches, depending on their vigor. Cultivate thoroughly after planting to keep the weeds well in check, and if the soil is likely to be dry, mulch with straw to help retain the moisture. Cultivation should be quite shallow, since the feeding roots are near the surface.

POULTRY

The increase in the 1952 turkey population in Canada indicates that more farmers consider turkeys a source of income, but prices are softening.

U. of M. Poultry Day

THE five major factors that determine success or failure in the poultry business are size of flock, feed and management, the pullet-hen ratio, labor efficiency and capital investment. Those who are above average in only one of these factors make returns per bird as low as 21 cents; those who are above in all factors can make as much as $3.72 per bird, even at today's poultry and feed prices.

These statements are based on a poultry survey of Manitoba farms conducted by T. O. Riecken, economist in charge of the federal economics office in Winnipeg, and D. C. Foster, poultry specialist with the Manitoba department of agriculture. The report was given to 65 persons attending a recent poultry day at the University of Manitoba.

Mrs. C. H. Piper, Headingley, president of the Manitoba Approved Flock Owners' Association, reported on the year's work. She urged all members to study proposed marketing boards of the type recently voted down by Ontario poultrymen. She indicated that the Manitoba association supports marketing boards in theory, and may yet have an opportunity of voting on them.

The early chick hatch was higher than in comparable months last year, but a sharp decline in demand left some hatcheries with chicks that had to be destroyed. Indications are that by the end of August the total hatch will be ten per cent below the same time in 1951. The early hatch was heaviest in the three prairie provinces, in contrast with the eastern provinces where the hatch was down.

Turkey poult numbers are up, with the end-of-May figure being 64 per cent above the same date in 1951. Market prospects for these birds are somewhat disturbing; already there is a heavy backlog of poultry meat in storage, and prices of fowl have declined ten cents a pound as compared with a few months ago.

Egg prices may be expected to strengthen by around ten cents a dozen by the end of the year, in the opinion of A. F. Darnell, district inspector of the federal poultry products division. In the meantime support prices for eggs are some help.

Broiler processors have had success in gaining consumer acceptance of two and three-pound birds marketed at ten to 12 weeks of age. Mechanization in the broiler plants permits one operator to look after 30,000 to 40,000 birds, and so cuts production costs. Experience indicates that even this concentration of birds does not increase disease, and the mortality rate of three to six per cent in typical plants is lower than that on many farms.

Egg-washing machinery with a capacity of 60 dozen eggs per hour was demonstrated; also shown was an electric de-beaking apparatus which removes a quarter of an inch from the tip of the upper beak. This operation will not affect the ability of the bird to feed, and it has been found the surest method of preventing cannibalism.

Pullorum Control

IT is generally recognized that pullorum disease has been brought very well under control in Canada. The latest figures show only 0.13 per cent of reactors for all provinces. However, Nova Scotia is setting the pace; approved poultry flocks in that province have not shown a single reactor for four years.

All three Maritime provinces were declared free of the disease in 1948, but Nova Scotia is the only province that has remained free of infection since that time.

Late Summer Range

IT is important to have good range throughout the late summer and fall. This maintains the birds in good condition and increases the likelihood of raising a flock that will lay well throughout the winter.

The experimental farm at Brandon, Manitoba, has recently reminded poultry breeders that good range provides a source of nutrients to supplement the ordinary ration, and contributes to disease control by providing healthy conditions for rearing birds.

Range is normally thought of as a source of vitamins, but succulent forage is also a source of protein. Only

a small amount of this protein is actually ingested, but it has a sparing effect on the more costly proteins provided in the rations.

The range at the Brandon station is operated on a three-year rotation, with birds on it every third year. The first year after the chicks are on it the range is fallowed and seeded to alfalfa at the rate of 12 pounds per acre, with or without a nurse crop. The second year it may be possible to get a crop of hay, and the third year the birds are again run on the range. About 400 birds are run to the acre.

This procedure, particularly when coupled with frequent moving of the shelters, waterers and feed troughs, offers an excellent opportunity to control disease, and increases the probability of healthy, well-grown birds going into the laying house in the fall.

A Lot of Eggs

RECENT news reports indicate that a hen in Chichester, England, demolished an egg laying record established a quarter of a century ago by a University of Saskatchewan bird. The Saskatchewan hen laid 358 eggs in 365 days. The English bird is reputed to have delivered her 360th egg on her 158th day on test.

The bird, named Duplicate, is a North Holland Blue. She began to attract attention early this year when she laid 26 eggs in one week.

Another English bird—Jennifer—is reported to have died 24 hours after laying ten perfect eggs in 45 minutes. Her proud owner is having her stuffed and set up in a glass case with her ten eggs.

More on Antibiotics

DURING the past few years several compounds which do not appear to be essential nutrients have been found to possess growth-promoting powers for chickens. The most important of these are antibiotics, which are chemicals secreted by certain micro-organisms to protect them from other micro-organisms. T. M. MacIntyre, poultry nutritionist at the experimental farm, Nappan, N.S., reports that the use of minute traces of these antibiotics in starter and growing rations has resulted in gains of ten to 15 per cent over that obtained with rations containing no antibiotic. Certain derivatives of arsonic acid and certain surface active agents also show an ability to promote growth.

It is not perfectly clear how these compounds act to boost growth. Antibiotics will destroy certain micro-organisms, and one theory is that they destroy harmful bacteria in the intestines. It is not clear whether this is their main or only function.

Poultry producers should be cautious in the use of these growth promoters. There is some evidence that certain micro-organisms become immune to some antibiotics, the use of which may lead to a very virulent type of bacteria, and introduce new problems of disease control. The use of arsonic acid derivatives and surface active agents is condemned by some workers because of the meagre knowledge available of the long-term effects on animals and humans.

There are no reports of antibiotics being of value in the ration of mature stock, or laying or breeding hens.

FARM YOUNG PEOPLE

Children like to feed the pen calves in the spring but later in the year the novelty wears off and they are glad to let their Dad or big brother do the chore.

Conservation Club

THE first conservation club was recently formed in Ontario. It is to be known as the South Waterloo 4-H Conservation Club, and the membership is made up of boys and girls between the ages of 14 and 21. The new club is being sponsored by the Preston-Hespeler Rotary Club.

The purpose of the club is to promote interest in and a better understanding of soil conservation. The principles of good soil management and ratios of short-term hay and pasture mixtures will also be featured in the club program.

In an effort to acquaint members with different seed varieties available, each member will be required to grow one rod of ten different grasses. The distribution of free samples of seed was a feature of the organizational meeting. The varieties include red clover, meadow fescue, alfalfa, white clover, birdsfoot trefoil, timothy, alsike, orchard grass, brome and reed canary grass. In addition to this, three pasture mixes will be set up to demonstrate the application of manure and commercial fertilizer and a combination of the two.

Elephants by Air

AIRCRAFT are carrying varied cargo goes around the world. One of the recent trips reported was the movement by air of five half-grown elephants from Bangkok, India, to England. Not many weeks ago the elephants were roaming the jungles of Thailand; they are now learning to entertain British children in a circus.

The five elephants, weighing half a ton each and standing four and a half to five feet high, travelled in a British Overseas Airways plane which had specially strengthened floors. They were driven close to the aircraft in trucks and stepped across into their stalls, in which had been made available half a ton of hay, a generous supply of sugar cane and plenty of water.

The elephants were alarmed when the engines were started and the plane began to move, but their attendant—T. I. Pyle—soothed them with sugar cane. Once airborne they accepted the whole unusual procedure as being more or less normal. They arrived at Calcutta that night, and flew on to Karachi the next day; the next stop was at Bahrein on the Persian Gulf, then on to Cairo and Tripoli.

They arrived at London Airport after a five-day journey and were greeted by photographers and newsreel and television cameramen. The British Broadcasting Corporation reports that as a prosaic end to their world travels they were loaded into a large truck trailer for the last leg of their journey to the circus headquarters at Windsor.

Club Leaders Meet

ONE hundred and forty-five voluntary club leaders recently met at the school of agriculture at Olds, Alberta. During the two-day conference they heard addresses by O. S. Longman, Alberta's deputy minister of agriculture; G. S. Black, supervisor of junior clubs, and James Moore, public relations officer of the 4-H Club Council. The importance of club work was impressed upon the visiting leaders.

The club leaders were given an opportunity to indicate their own opinions. They were divided into 15 groups, with one of their number as chairman of each group. The chairmen then took part in a panel discussion under the chairmanship of L. Usher, assistant supervisor of farm clubs. The panel concluded that farm life is greatly enriched by club activities; that junior club leadership conferences are helpful, and that district conferences would also be of value; they also felt that club meetings held in the homes with the parents in attendance widened the scope of club work and increased its value.

Record Book Awards

AWARDS will be given this year to British Columbia secretaries of 4-H Clubs who submit the best kept record books. In the opinion of Miss Echo Lidster, B.C.'s supervisor of 4-H clubs, the record books should be more than just an account of club activities. "They should include also a history of club work in the area and a summary of the club's accomplishments, together with support that is given by local leaders and sponsoring institutions."

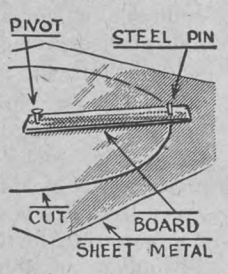
Prizes are to be awarded for the best record in each club project, including, clothing, beef, dairy, swine, poultry, potato, honey bee, rural electrification and community clubs. To qualify for an award, secretaries' records must cover the period from January 1 to December 31, 1952.

Workshop in August

Short cuts developed in the shop can speed harvest operations

Cutting a Tin Disk

Here is a method I use for cutting a neat large hole in any light sheet metal, roofing, or pasteboard. Take a piece of lath or board slightly longer than the radius of the desired hole, and drive a small nail through one end to serve as a pivot. Then drive a record-playing needle, or other hardened steel pin, through the board at the exact distance from the nail which will equal the radius of the hole to be cut. Drive the pivot nail through the sheet metal at the center of the desired hole. Press down on the pin or needle end, and rotate it around the pivot. The sharp steel pin will cut the metal after a few turns, leaving a perfectly round hole. The steel pin must be kept sharp.—I.W.D.

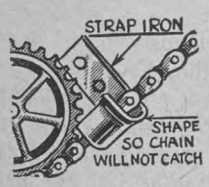


Part Sacks of Cement

Small quantities of cement can be kept for months in a tight paint can, but a sack that is only partly used can be prevented from hardening for some time, if it is put in one corner of the oat bin and dry oats shovelled around it. The dry grain will prevent the cement from taking up moisture on humid days. When cement has hardened in the bag, it is questionable whether it is worth using at all. If it has absorbed enough water to set hard, it has little or no value except for filling. A common rule is to drop such a hardened bag on a concrete surface two or three times, then open it and shake through a one-quarter inch screen. What goes through can be used with reasonable safety for mixing into cement, but what does not go through is better used for filling.—E.A.E.

Worn Sprocket Chain

Keep this idea in mind before harvest time. It may save a great deal of time for you as it did for me. If the chain on your implement is worn and tends to jump off, you may be able to avoid buying a new one by using a piece of one and one-quarter inch strap iron bent to a U shape. Find the nearest place the strap iron can be attached to so that it will be held firmly beside the sprocket. Bolt it on and bend the other end so that it forms a U around the chain, close enough to prevent it from slipping off. Care should be taken to bend the side where it rubs so that the links will not catch on it, but slide against it.—W.O.K., Manitoba.

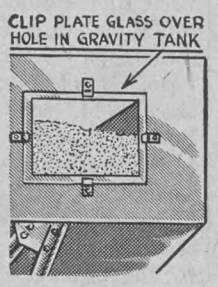


For Cleaner Stored Potatoes

When picking up potatoes, a considerable amount of dirt usually comes with them into the pail, and eventually gets into the sacks or cellar. I use an old pail with several large holes in the bottom, to screen out the loose dirt. It's worth trying.—F.B.

Grain Tank Window

When using small power take-off combines having gravity dump tanks, it is impossible to tell how much grain is in the tank until it is completely full. To overcome this handicap, place a glass window in the tank as illustrated. Cut a hole five by seven inches in the tank and place over it a piece of heavy plate glass about one inch larger each way. Four small metal clamps held in place with stove bolts will hold the window.—A.B., Sask.

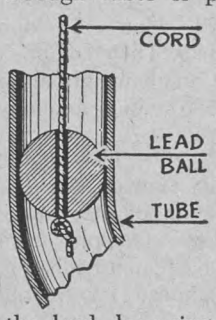


Home-Made V-Pulley

Here is a device which saved me several dollars when I needed a large V-belt pulley. Anyone handy with a welder can make a V-pulley from two discarded disk harrow blades, by cutting the center from one blade and welding the remaining wing on the reverse side of the other blade as shown. It can then be welded to a hub that fits the shaft to be driven. It might be easier to get a good fit on the shaft if a large pulley were welded to the side of a smaller V-pulley, so as to accomplish the good fitting and also secure a double V-pulley. To make a smaller pulley, simply cut out a smaller circle in the first blade.—F.S.

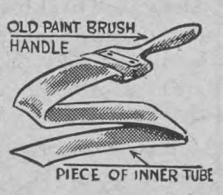
To Run Rope Through Piping

Sometimes, especially with electric wiring, it is necessary to run flexible material such as electric cord, rope, chains, or other similar materials, through tubes or piping. To do this easily, start a small thread or cord through the opening, attached to a lead ball. A hole can be drilled through the lead ball, or a steel needle or a small nail can be driven through the lead, by using a cork. After the first cord is pulled through, provided it is strong enough, it is easy to pull the desired material through. It is important to make the knot which holds the ball on the light cord, small enough so that it won't catch ahead of the lead ball.—W.F.S.



Slapper for Livestock

Hitting animals with sticks often bruises them, or otherwise discolors the flesh, if they are market animals. I used an old paint brush handle with a length of inner tube fastened to it. I find this makes an ideal slapper for driving cattle and pigs, and doesn't injure them in any way.—I.W.D.



The Scientist

Continued from page 7

about one-eighth of a normal crop.

Remember farmers coming in from the harvest fields with face and clothes covered red with rust spores, from crops that were only a fraction of what they would have been, but for this dread disease of grain? The last serious rust year was 1935. What farmer is not grateful to the men who, since 1924, have worked in the Rust Research Laboratory at Winnipeg, as plant breeders and plant pathologists? Together with scientists in the United States, they have produced rust-resistant varieties which are estimated by the Canada Department of Agriculture to have increased wheat yields —on an annual basis as compared with the varieties previously sown—to the value of $3 million in the case of Redman, $2 million for Regent, and $15 million for Thatcher wheat.

The development of two million acres of arable land in the Peace River area was hastened by the breeding of early maturing wheat such as Garnet and Red Bobs. In 1947, a better wheat, Saunders, was introduced, which by 1951 accounted for more than 12 per cent of the total wheat area in Alberta. It is estimated that Garnet makes an annual contribution to Canadian agriculture of $550,000, and Saunders, $650,000.

Wheat producers have had plenty of trouble in the past, from wheat stem sawfly. Damage from this one insect used to run about $20 million a year. Then H. J. Kemp, and later Arnold Platt, at the Swift Current experimental station, began to breed a wheat with a solid stem, through which the destroying larvae of the sawfly could not go. Rescue wheat, introduced in recent years, is the first result, and is credited with a value of $4,500,000 per year. Quite recently, Chinook, a new sawfly-resistant variety, has been released.

Between 1937 and 1949 new and improved oat varieties were developed, including Ajax, Exeter, Beaver, Vanguard, Garry, Roxton, Abegweit and Erban. Their combined contributions to Canadian agriculture are estimated at $26 million annually.

BEFORE 1910, very little barley was grown in Canada. In that year Dr. C. A. Zavitz, of the Ontario Agricultural College, Guelph, introduced O.A.C. No. 21 malting barley. It is still our standard for malting quality, but today it is being replaced by Montcalm, developed by Prof. Emile Lods at MacDonald College, Quebec. In the meantime, a healthy malting barley industry has been developed in Canada, which utilizes up to 15 million bushels per year, while in addition, Canada exports approximately the same amount of malting barley to the United States market. Many new feed barleys have also been introduced, among which is Olli, the leading barley in the Peace River area of Alberta and other parts of that province.

Have you forgotten, or did you ever know, when the first soil survey was undertaken in Canada? It was in Manitoba, in 1924. Other provinces soon began making similar surveys, and a short time later federal and provincial authorities began co-operating in this important work. Soil scientists began to classify our soils, and rate them according to productivity. Before long, these studies of soils entered into the tax structure of rural municipalities. In Manitoba, Prof. J. H. Ellis found that over a million acres of farm land in that province had been abandoned; that a further 1.5 million acres required immediate action to control soil drifting; and an additional million acres of good arable soils needed protection in the form of field shelterbelts.

In Alberta, and all along the northern part of the settled area in the prairie provinces, there is a large area known as the grey-wooded soil zone. It covers about a hundred million acres in Alberta alone, and about 14 million of those acres are considered arable. Farmers who first began cultivating these soils found, however, that they could not get good crops. Drs. F. A. Wyatt and J. D. Newton, at the University of Alberta, discovered that these soils were deficient in sulphur, and began experimenting with sulphur and other fertilizers. The result was that not only yield, but the quality of the wheat grown on these soils, was greatly improved, so much so that bread made from wheat grown on unfertilized experimental plots was inferior in all respects to that from wheat grown with fertilizer.

Plant pathologists specialize in knowledge of plant diseases. At the present time, in western Canada, they are engaged in the study of many different diseases, including pasmo, a disease of flax; rust and wilt of sunflower; bacterial black chaff of wheat; speckled leaf blotch of barley; and grey speck and halo blight of oats. At present, a strong and sustained effort is being made by plant breeders to secure varieties of wheat resistant to the virulent Race 15B of wheat stem rust, before this disease can strike hard at Canadian prairie wheatfields. "Without research," one prominent Canadian agricultural scientist said not long ago, "it might well be that within five years the farmers of eastern Saskatchewan and of Manitoba would be growing little or no wheat."

WHAT the scientists have done with plants, they have also done with livestock and poultry, though sometimes in less striking fashion. In the last 25 or 30 years, average milk production per cow in Canada has been increased from around 3,800 pounds to nearly 5,000 pounds. This has been the result of improved breeding, feeding and management methods, based on the results of experiment and reasearch. The revolution in the dairy industry, which Dr. Stephen M. Babcock began in 1889 when he invented the Babcock tester for milk fat, has been developing much more rapidly in recent years. Artificial insemination, the development of mineral and protein supplements for livestock feeding, the study of trace minerals such as cobalt, sulphur and molybdenum, for example, the use of urea and the newer antibiotics, are discoveries of immense value, as are methods for the barn drying of hay, the making of grass silage, and the use of irrigated pastures. The study of livestock breeding, feeding and management is a never-ending process, with new

scientific discoveries always in the offing.

Cattle at Swan River, Manitoba, were afflicted with a severe and baffling ailment. The odd thing about it was that the most emaciated animals were those grazing on the most luxuriant pasture. Prof. J. M. Brown, Department of Animal Science at the University of Manitoba, discovered that an excess of molybdenum in the green herbage was preventing the normal assimilation of copper. Administration of copper sulphate to affected animals led to immediate recoveries. According to one farmer, this information saved him more money in a year than was expended on the entire research project involved.

THE poultry industry has benefited no less than the livestock industry —perhaps more noticeably. Forty years ago, the average Canadian hen laid about 100 eggs per year. Today, she averages 50 per cent more. Dual-purpose breeds, which combine high egg production and good table quality, have been developed. Redbars and Hampbars, developed by Prof. E. A. Lloyd at the University of British Columbia, not only combine these qualities, but are "autosexing"—that is, the male and female chicks can be distinguished by their down color at a very early age.

Dr. Hugh Branion, head of the department of animal nutrition at Guelph, was responsible for much of the early research on the necessity for Vitamin D (the sunlight vitamin) in poultry rations. He was the first to recognize the importance of manganese for the prevention of perosis, a deficiency disease which cripples the legs of chicks.

A very large book indeed would be required to contain the complete story of the manner in which present-day agriculture is dependent upon the discoveries made by scientists during the present century. A well-known American farm management consultant said recently that farm science had moved the burden of the farmer from his back to his head, where it was easier to lift but harder to carry, because it required less muscle and more brainpower. The successful farmer of today, if he is to benefit from scientific discoveries and produce most economically, finds it necessary to work with the scientist and agrologist.

Hydroponics

THE art or science of hydroponics is the growing of plants in water solutions of minerals, without soil. Enthusiasts claim that this method may eventually help solve the serious food problem in some parts of the world. In Japan, for example, it is reported that the American army maintains an 80-acre hydroponic farm.

The theory is not new. An English scientist is credited with the first recorded experiments as early as 1699. During World War II the United States army encouraged research in hydroponics with the idea of developing some method of supplying food to large numbers of troops concentrated on small unproductive atolls in the Pacific. Some work was done at Miami, Florida, out of which has developed a small commercial hydroponic industry, which the city of Miami is now publicizing.

● **This feature is furnished monthly by United Grain Growers Limited**

MONTHLY

World Crops

Current prospects are favorable to a world wheat crop of considerable proportions this year. All the world's major producing countries have indicated they expect average, or better than average yields and crops are generally good in most of the smaller countries for which information is available.

In the United States another year of above normal crop production is indicated by the U.S. Government Crop Report issued by the Department of Agriculture on July 10. Production of spring wheat, rye, barley and flaxseed is down sharply from 1951 levels but these losses are more than offset by estimated increases for corn and winter wheat.

Total wheat production is estimated at 1.2 billion bushels, exceeding the billion bushel mark for the eighth year of the past nine. Last year only did production fall below a billion bushels. The loss in spring wheat production this year is the result of severe drought conditions in the Dakotas and Montana and is estimated at 201 million bushels, some 40 per cent below the 1951 production of 342 million bushels.

The winter wheat crop, estimated to be in excess of one billion bushels tends to offset the reduction in the spring wheat crop. This is the reverse of the 1951 situation when a large spring wheat crop offset a below average winter wheat crop of 645 million bushels.

Estimates for other crops in the U.S. this year are: corn, 3.4 billion bushels, a half billion bushel increase over last year; oats, 1.3 billion bushels, a decline of three per cent; rye, 16 million bushels, a decline of nearly 25 per cent; and flaxseed, 28 million bushels representing a drop of 20 per cent from last year.

In China and India this year's wheat crop is expected to show a moderate increase over last year. Recent rains in South Africa have improved prospects for an above average crop and North Africa expects a better than usual crop.

Crop prospects in both the eastern and western sections of Europe are reported to be uniformly good with the general consensus of opinion being that this season's crop will exceed last year's outrun of 1.5 billion bushels.

Western European countries have experienced some anxiety as a result of one or more of drought, rust, root rot and scorching, but the damage resulting therefrom has been largely averted by improved weather conditions. In Great Britain, last year's harvest of 86,480,000 bushels is expected to be topped by at least four million bushels. In France it is estimated that this season's increase will enable that country to meet her International Wheat Agreement export commitments. Western Germany is expected to increase her bread grain imports by 400,000 tons but imports of feed grains will probably decrease considerably.

Eastern European countries are reported to be expecting an increase of 28 million bushels in wheat production this year. Poland and Hungary are said to be offering wheat to western Germany at the present time, an indication of surpluses available for export. Trade reports also indicate that Russia has recently entered into some export deals at an earlier date than usual.

The Australian wheat crop is expected to be about the same as last year, despite efforts to increase production. Abnormally wet weather in the south delayed seeding operations and more difficulty has been created in the Western Australian wheat belt by drought. The over-all reasons for the failure of Australian farmers to increase production, in addition to adverse weather conditions, are thought by one source to be due to inadequate transportation, high freight rates, a shortage of materials and labor, and the price policy in effect on wheat used in domestic consumption.

Moisture conditions in the Argentine are described as good to excellent. While some increase in crop acreage is expected, reports are that the response to price increases for wheat is not up to that desired.

Argentina's announced goals for grain production, as part of the second five-year plan, indicate the government's plan to return to prewar production levels. Commencing in 1953, the seeding goal for wheat is slightly above the 1939 acreage of 17,830,000 acres. Substantial increases are planned for barley and oats with a very major increase for rye which would nearly treble the 1939 acreage devoted to that crop. In order to give definite effectiveness to the policy, the Argentine minister of finance has announced that henceforth agricultural credit will be granted only to those producers placing their land in the optimum type of production. A producer must first secure the approval of the Bank of the Nation for his production plans before he can obtain credit.

Canada's crop conditions are generally described as good to excellent with some predictions suggesting that the West's wheat crop may be 24 per cent better than the long-term average and 15 per cent better than last year.

Many local areas report scattered damage to crops by wind and hail, but moisture conditions in almost all areas of the West are exceptionally good. Recently rust has made its appearance in Manitoba and part of southern Saskatchewan. How much of the infestation is of race 15B is not known at time of writing but since the crop is well ahead of last year, it is probable that serious rust damage will be avoided if we receive warm, dry weather during the latter days of July and early August.

While the prospects are for a large world wheat crop in the current year, the Dominion Bureau of Statistics, in its monthly wheat report, states that supplies of wheat remaining in the U.S., Canada, Australia, and Argentina on or about June 1, were substantially lower than a year ago. Wheat remaining in these countries and available for export or carryover was estimated at some 659 million bushels, in contrast to slightly over 809 million bushels a year ago. Supplies held by these countries, in millions of bushels (last year's holdings in brackets) were as follows: Canada,

COMMENTARY

332.8 (251.5); United States, 267.5 (436.4); Australia, 55.1 (71.1); and Argentina, 3.5 (50.6).

I.W.A. Council Meeting Scheduled for Washington

A meeting of the International Wheat Council to resume discussions on renewal of the International Wheat Agreement is scheduled for Washington, January 12, 1953. Major questions to be discussed are whether agreement can be reached on a formula for automatic revision of maximum and minimum prices at regular intervals and the establishment of price levels satisfactory to both importing and exporting members to the Agreement.

At a recent meeting of the Council in London, the text of a communication from the Council to member governments regarding renewal of the Agreement was approved. The meeting also re-elected Australia, Benelux, Canada, Greece, India, Italy, New Zealand, Mexico, the United Kingdom and the United States to the Council's executive committee for the 1952-53 Agreement year. It was further agreed that transactions under I.W.A. during the crop year 1952-53 would not be entered into by any member country in excess of 95 per cent of its total guaranteed quantity before January 31, 1953, or such other date as the Council might specify.

The text of the Council's recommendation to member countries reads as follows:

1. The International Wheat Council, in order to fulfill the requirement of paragraph 2 of Article XXII of the International Wheat Agreement, has considered the recommendations to be made to member governments regarding the renewal of the agreement beyond July 31, 1953.

2. In the discussions held by the Council for this purpose it has been agreed that certain changes in the provisions of the agreement would be desirable if it is to be extended for a further period. It has not been possible so far, however, to reach understanding on some major matters, such as maximum and minimum prices; and the Council considers that certain questions, including some which have an important bearing on prices, should be examined further in detail before discussion of them by the Council is resumed. Among these questions is whether agreement can be reached upon a formula (possibly based on an existing index or one devised for the purpose) by means of which the maximum and minimum prices agreed upon at the outset can be made subject to an automatic revision at regular intervals during the course of an extended agreement.

3. The Council has remitted these matters to a continuing committee for examination and report, but it will not be possible for the committee to complete its task for some time.

4. In the circumstances the Council, while unable at this time to make any final recommendations to member governments about the renewal of the agreement, recommends that this question be further studied in the light of the report from the continuing committee.

5. To this end the Council proposes to resume discussions on the extension of the agreement on January 12, 1953, and final recommendation will be communicated to member governments thereafter.

U.S. Import Control Changes

The United States Department of Agriculture, on July 3, released details of its new import control program following extension of the Defence Production Act with certain modifications, for a further ten-month period. It was Section 104 of the D.P.A., restricting imports of dairy products into the United States to which Canada and a number of European countries objected last year. These countries objected to the restrictions on the grounds that they were contrary to the Articles of the Geneva trade treaty to which the U.S. is a member.

Section 104 as now modified provides that import controls may be exercised by types or variety of a commodity or product. The secretary of agriculture is given authority to increase the import quotas established for each type or variety of a commodity by as much as 15 per cent when he deems such action necessary, taking into account the broad policy effect on international relationships and trade. The modification does not, however, change the three basic standards he is required to exercise in making the initial determination of the need and extent of import controls, i.e., the effect of such imports on (1) domestic production, (2) marketing and storage, and (3) price support programs.

Under the announced program, restrictions were removed on French Roquefort, and several Italian cheeses. The removal of these restrictions divided the protesting nations, for France and Italy were thereby placed in a position of having to protest in principle only, which they are unlikely to do. On the other hand, Denmark and the Netherlands received increases on their main cheese exports amounting to about 25 per cent which served to reduce their protests to some extent although neither is yet satisfied.

It has been reported in a grain trade journal that the Netherlands authorities have ordered the cancellation of plans for the purchase of flour under the Mutual Security Administration procurement authorization in retaliation against the U.S. cheese restrictions. Cheese sales have been currently providing the Dutch with a major proportion of their U.S. trade. It has been reported that U.S. mills expected that the dollars specifically allocated for the purchase of flour would have covered some 12,000 tons in the initial deal. Current thought is that only restoration of cheese imports to former levels will enable American millers to revive their flour trade with Holland.

The Dutch cheese trade was fostered with the approval of the Economic Co-operation Administration officials because it provided a valuable source of dollars for the Netherlands. The U.S. restrictions have been scored from many sources because the nation's cheese imports, including those from Canada, are less than five per cent of U.S. consumption.

Suggestions that Canada would also take retaliatory action have been denied by Canadian officials. While the modified restrictions are a step in the right direction, there will be strong Canadian disappointment that they have not been removed entirely.

CANADA PACKERS LIMITED

REPORT TO THE SHAREHOLDERS

The 25th year of Canada Packers closed March 26th, 1952.
(Hereinafter the year is designated 'Fiscal 1952'.)

Dollar Sales were at a new high		$390,000,000
Previous high,—Fiscal 1951,—was	$356,000,000	
Tonnage (weight of product sold) was also at a new high,—lbs.		1,708,000,000
Previous high,—Fiscal 1950,—lbs.	1,699,000,000	
Net Profit was		$1,964,545
after Depreciation	$1,392,790	
" Income Tax	1,904,923	
" contribution to Employees' Retirement Plan	465,885	
	$3,763,598	
Expressed as a percentage of sales, Net Profit was the lowest in the history of the Company,—viz		½ of 1%
In the low year of the depression,—Fiscal 1932,—net profit in terms of sales was		7/10 of 1%
Net Profit in terms of product sold was		11.5¢ per 100 lbs., that is, just over 1/9 of 1 cent per lb.

Because profit was only slightly more than sufficient to meet the dividend . . . ($1,800,000) . . . nothing could be set aside for bonus to employees. For sixteen years bonuses had been paid without interruption, totalling . . . $14,460,000. The fact that none was possible this year was a cause of sincere regret to the Directors. The policy of sharing profits with employees when operating results permit has not been changed.

The meagre profit of the year was due to severe price declines (and consequent inventory losses) on several of the chief products handled by the Company.

The following table sets up prices month by month on those products.

TABLE I
Average Monthly Price per lb. on Certain Products
April, 1951, to March, 1952

	Steers 1000 lbs. down Toronto	Hogs B-1 Dressed Toronto	Cottonseed Oil Refined Toronto	Hides Light Native Cow Toronto	Calfskins Light Toronto	Wool 'B' Super Toronto
April 1951	32.94¢	32.07¢	32.74¢	40.75¢	82.00¢	$2.75
May	32.73	34.89	30.98	39.50	71.00	2.25
June	33.69	38.00	24.75	39.50	68.00	1.50
July	33.91	39.51	21.78	29.50	60.00	.95
Aug.	33.48	36.13	22.58	32.00	45.00	.70
Sept.	33.61	32.90	22.07	30.50	47.50	.90
Oct.	33.77	30.13	21.52	32.00	51.00	.99
Nov.	33.62	29.39	20.08	25.00	38.00	.92
Dec.	34.12	29.53	19.81	23.50	37.00	.95
Jan. 1952	32.86	28.44	18.30	19.50	33.00	.90
Feb.	28.56	26.48	17.78	15.25	24.00	.80
March	25.93	26.25	17.60	15.50	25.50	.70

The declines on Cottonseed Oil, Hides, Calfskins and Wool are more nearly 'vertical' than any since the post-war deflation of 1920-21.

However, there is one important difference.

In 1920-21 almost all commodities declined vertically. In the present decline the number of products is limited. Prices of most other products handled did not decline. In some cases they advanced.

In fact, the *average* price of all products sold within the year advanced substantially. This is revealed in the following table.

TABLE II

	Tonnage	Sales	Average Price per lb.
Fiscal 1951	1,693,000,000 lbs.	$356,000,000	21.1¢
Fiscal 1952	1,708,000,000 lbs.	$390,000,000	22.9¢

The 'averages' in the above table are not fully comparable, inasmuch as the distribution of products (the relation of each to the total) is not constant. However, the comparison is valid as a general indication of price trends. Throughout most of the year, prices of both cattle and hogs (the heavy-volume products) were at record high levels. This was particularly the case in respect of cattle. In December and January, prices of certain grades of cattle actually advanced to a level at which substantial numbers were imported from United States. It was the first time such a movement had occurred in 32 years.

The seeming conflict in price trends,—between the advance reflected in Table II and the sharp breaks of Table I,—is less confusing than at first appears. The dominant trend, as revealed by the advance of Table II, is one of strength. That strength derives from the colossal defence programmes of the United States and Canada.

Though both programmes are somewhat behind schedule, and though there are signs in United States of some disposition to whittle down, nevertheless these programmes remain the dominant factor in the economy of both countries.

On the other hand,—notwithstanding the underlying strength,—the price declines set forth in Table I are a natural reaction to advances which had reached an abnormally high level.

Compared to pre-war (1935-39 equals 100), general wholesale prices now stand at approximately 230.

Relatively to the same base (1935-39 equals 100), the high points of the products listed in Table I were as follows:—

Cattle	(December)		563
Hogs	(July	)	334
Cottonseed Oil	(April	)	459
Hides	("	)	349
Calfskins	("	)	429
Wool	("	)	902

These phenomenal advances on the one hand stimulated production and on the other brought substitutes into the market. Substitutes became especially important in the case of wool and leather.

Although the collapse of these extraordinary prices carried a heavy penalty in the form of inventory losses, nevertheless the final result has been to restore more normal operating conditions. Providing the defence programme is maintained, the prospect of the year ahead is for a normal operating profit.

It will be noted that the break in cattle prices occurred in February, 1952. It was brought about, not as a reaction to high prices (though prices were very high), but as a result of a specific event. That event was the announcement that foot and mouth disease had broken out in Southern Saskatchewan.

This outbreak precipitated a crucial situation in the Live Stock Industry.

Canada produces annually a surplus of meats of three to four hundred million pounds. For this surplus the United States had become the only external outlet. (In calendar 1951, 98 per cent of the surplus found its way to the U.S. market.)

On the day that foot and mouth disease was announced (February 25th, 1952) the United States placed an embargo against all live stock and meats from Canada.

The Government of Canada was the only entity able to cope with a crisis of such magnitude. Failing prompt action by the Government, an immediate collapse would have occurred in all live stock prices.

Prompt action *was* taken.

The government summoned the representatives of the Packing Industry to Ottawa and informed them of the policy to be followed. From the discussion

The Country Dance of Yesteryear

Prosperity has taken its toll of the happy country dance of half a generation ago

by **JOHN PATRICK GILLESE**

ATTENDING a bush-country dance this summer—up in northern Alberta—the thought struck me forcibly that times have changed. Rows of new cars were lined up neatly outside the hall. The orchestra was imported—from Edmonton. You bought tickets at the outer door, handed them over at the inner door. Girls wore genuine corsages and checked their shortie coats and fashionable capes. Yessir, for those who can remember "the good old days" of Bennet Buggies and converted Model T engines doing such marvelous jobs as pumping water, cutting firewood and chopping grain (if you didn't feed too heavily) things have changed. It's a good deal less than 15 years since the last "hard-time dance" was held up in the country where I was raised—if you came in good clothes, you were "fined," for the very charitable reason that most people had no better clothes than overalls and house dresses.

Actually, dances in those old days were designed to be morale builders, not money-raising affairs. The orchestra, usually six-piece, was always local talent, nearly always farm folk, and always good. From the Caribou country of B.C., where a colorful character named Dutchy Langeler played at all the Caribou stampedes (in addition, Dutchy was a real-estate agent, trapper, fur buyer, clothing salesman, rancher and antique dealer) right down to the outskirts of Edmonton, all respectable old-time orchestras travelled in Model T Fords, with flapping side curtains. One reason for this was that the Model T would take them anywhere. Another reason was, it was the only car they owned—and about the only one seen on the roads. Invariably when one of these came steaming into town, either in the middle of the March break-up or with the first November snows, it wore a piece of cardboard prominently painted, with this legend: "Licence Applied For." There was no money for licence plates in those days, but Alberta law discouraged officers from arresting you if you had applied for your licence, which could be taken out during any quarter of the year.

Admission charge to the dances, whether in schoolhouse, community hall or hayloft, was strictly a gentleman's affair. Officially, as I recall, men were charged 25 cents; the ladies got in for bringing a pie or sandwiches. The ticket-taker (pardon me—he merely pinned a little piece of ribbon on your coat lapel) kept at the job religiously until he had accumulated six dollars for the orchestra (which meant about 50 cents per musician), the price of the coffee, a dollar for the woman who would clean the hall the next day, and any sundry expenses that might have arisen since the last dance. After 10 o'clock at the latest, he moved discreetly away from the door so that those men without the 25 cents could come in and dance without embarrassment. As I remember it, there was always a great mob swapping stories (about hail, drought, sick cattle and prosperity being just around the corner) and otherwise, as they described it, "enjoying a bit of fresh air" till just about 10 o'clock, when suddenly the hall filled up. A guy that happened to be first on the dance floor two or three months running in those days was thought to have inherited a fortune. On the other hand, it was tantamount to social suicide to sneak into the hall after 10, if it was a known fact that you had 25 cents in the house. The money the orchestra earned, incidentally, usually paid for gas and repairs to the Model T.

AN old-time dance proper was quite an affair, and it strikes me that sociologists have yet to stumble across the contribution it made to the cultural outlook of the West. In addition to the community sing-songs, square dances, waltzes and other fancy numbers, somebody (usually a bit unsteady from the effects of various potato - wheat - and - rhubarb "likkers") would sing a song, with no ear for the selection the orchestra was playing, and no ill-will toward those who were dancing over and against him. Somebody always got in a fight—a scrap that never amounted to much afterwards. In fact, Caribou Dutchy tells of the dances he played at where "old scores were settled outside—and in a gentlemanly manner. The crowd always abandoned the dance hall to hold flashlights, so the fighters could see what they were doing, so sometimes I'd go out and oblige with an appropriate tune."

When you consider the hardships of those days—young men and women both out working with "wealthy" farmers (usually "remittance men" or farmers with a small war pension) for five dollars a month and keep, with no decent clothes to wear, no hopes of marrying and settling down till prosperity turned its elusive corner, and oftentimes their parents collecting the wages before they were even earned—those dances were the finest place in the world to let off steam, gather new courage and dreams from the alchemy of laughter shared, and go home feeling at peace with the world again.

The bands themselves were as incredible as the hard times that gave them birth. Dutchy's band was known as the Caribou Buckaroos. Among other colorful, but less spectacular, orchestras were the Peace River Pioneers, The Sow Belly Seranaders and the Southern Ranchboys' Band. Dances lasted from about eight in the evening until three or four the next morning—only with the arrival of prosperity did dancing come under union regulations. Band leaders, talking over the old times with me, tell me of the good sports all their players were: getting out to push the car out of mudholes, sometimes sleeping in the jackpines when it stalled on the lonely

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it became clear that the only imminent crisis was in respect of hogs. The heavy run of hogs was just setting in.

The steps taken were:—

(a) A floor price for hogs,—previously announced,—was continued. The price was 26¢ per lb. dressed weight, for 'A' hogs.

(b) The Government undertook to purchase all the surplus over and above current consumption, in the form of tinned pork meat. That was the only form in which space for storing the surplus was available.

These measures tided over the situation until April 22nd, when increased marketings were beginning to threaten a collapse of cattle prices. Again a floor price was announced,—viz. 25¢ Toronto and Montreal for Good Steers.

At the same time an ingenious three-way plan was worked out by officers of the Department of Agriculture whereby Canadian beef is to be shipped to United Kingdom, substituting for beef purchased (by U.K.) from New Zealand. The N.Z. beef in turn is to be shipped to United States and sold there for what it will bring.

The Canadian beef so far shipped to U.K. has been largely stall-fed, and better in quality than the N.Z. beef which it replaces. The U.K., which gets this beef at the N.Z. price, will, therefore, benefit substantially from the arrangement. The N.Z. beef will reach U.S. in a frozen condition, which will subtract from its value in that market.

Live stock is one of Canada's most important industries. Four hundred thousand farm families are engaged in the production of food animals. Many of those families depend upon live stock as their main source of income.

The meats and other food products derived from live stock are a most important element in the nation's diet.

Moreover, the export of the surplus meats and by-products is a major source of external revenue.

All of this structure was threatened by the outbreak of foot and mouth disease. The Government was confronted with an immediate and heavy responsibility. There was only one way of avoiding a complete collapse of prices;—viz. to 'lift' the surplus off the market.

That the steps taken were, in principle, the only ones possible there can be no doubt. The loss involved in carrying them through is not yet known. The loss will be heavy,—but only a fraction of that which would have followed if the situation had been allowed to drift.

In carrying out those plans the Packing Industry played an essential role. That Industry had been built, not to deal with such a crisis, but as the processing and marketing segment of the greater Live Stock Industry. That it has been soundly built was evidenced by the fact that, when the crisis came, the Government had only to make its plans and instruct the Packing Industry to carry them through.

And all of this was done at a cost to the community of a fraction of a cent per pound.

EMPLOYEE RELATIONS

The difficult conditions of the past year have led to a careful and constant review of operating methods. Certain improvements and economies have been introduced. In this campaign for higher efficiency, the operating officers have had full co-operation from employees of all ranks. For this, Directors express their warmest appreciation.

Mention has been made that no bonus distribution was possible out of the profits of the year. However, out of the previous year's profits, in addition to a cash bonus of $1,300,000, a sum of $500,000 had been set aside as the nucleus of an Employees' Savings Fund.

As bonuses had been paid without interruption for sixteen years, Directors felt that employees had come to count upon a year-end cheque, and accordingly decided to distribute this year the sum set aside last year,—viz. $500,000. This has been done.

It is hoped that the results of the coming year will permit the resumption of bonus payments upon the accustomed scale.

Toronto, June 7th, 1952.

J. S. McLEAN
President

Extra copies of this report are available and so long as they last, will be mailed to anyone requesting them. Address to Canada Packers Limited, Toronto 9.

When Writing to Advertisers Please Mention The Guide

road home. Many an accordion player recalls his blistered fingertips yet, but even the oldest kept going gamefully as long as the crowd wanted them.

One of the real Alberta old-timers, "Pop" Brown (retired now) told me of the only time his orchestra nearly *didn't* show up for an engagement. His pianist (with most bands, usually the band-leader's wife) was a young girl quite anxious to make a good appearance, but in common with a lot of farm girls of those days she was used to wearing old flour sacks disguised as dresses. Sometimes the letters didn't quite bleach out, however, and that night was one of them. Anyone not facing her could plainly discern "98 lbs. net when packed" still showing. However, the spirit of those days prevailed, and she went anyway.

Most of the bands of 15 and 20 years ago are gone, the drums and accordions put away, the players retired or dead. Maybe in the odd attic an old handbill tells of the *Hard-time Harvest Dance;* or a broken guitar brings back the mystic music, the scraping of cowboy boots, the whooping and yelling. Western farmers were not, on the whole, a sentimental people—but some of them must feel, in their hearts, some hint of the debt they owe to the people who made those dances possible, who brought their youth together in the days when a dance was the only thing they had to look forward to. A dance and, perhaps afterwards, a walk home with the boy or girl of their choice, when the wet dew was falling and a crooked moon was setting in the red and humpy spruce.

Dairying

Continued from page 10

that prices are to be such that any efficient producer will be assured of a net return sufficient to allow him to maintain himself and his family in reasonable comfort.

Main features of his farming practice today are the extensive use of top-dressing with artificial fertilizers (spread by airplane, sometimes, in hilly country); scientific pasture management; systematic herd-testing, and breeding for higher production. These have made great increases in the carrying capacity of the dairylands. The butterfat average, too, has advanced, from 125 pounds per cow in 1920 to the present figure of about 240.

Earlier herds consisted in the main of Shorthorn cattle, suitable for both beef and milk. But as farming became more specialized, and the demand for butter grew, the Jersey breed gradually increased. Today in New Zealand Jersey cows, either purebred or crossed, far outnumber all others. Next in number are milking Shorthorns, Holsteins, Ayrshires, and Red Polls.

Farm work in New Zealand is highly mechanized. Every operation has its appropriate vehicle, implement or machine. Some 48,000 centrifugal separators are used in the dairies, and from these the skim milk is usually pumped direct to the piggeries. For although New Zealand has nowhere near the number of hogs per cow as her great rival, Denmark, she is now building up pork production along with her dairying. Much "whole"

United Grain Growers Limited

NOTICE

In accordance with the Income Tax Act, this will advise our customers (including both members and non-members) as referred to in the said Act, that in accordance with the terms and conditions, and within the times and limitations contained in the said Act, it is our intention to pay a dividend in proportion to the 1952-1953 patronage out of the revenue of the 1952-1953 taxation year, or out of such other funds as may be permitted by the said Act; and we hereby hold out the prospect of the payment of a patronage dividend to you accordingly.

The foregoing notice applies to grain delivered to this Company between August 1, 1952, and July 31, 1953.

UNITED GRAIN GROWERS LIMITED,
D. G. MILLER,
Secretary.

Winnipeg, Manitoba.

Notice of Dividend No. 42

United Grain Growers Limited

Class "A" Shares

Notice is hereby given that the Board of Directors has declared a dividend at the rate of 5% on the paid-up par value of Class "A" (Preferred) Shares (par value $20.00 each).

This dividend will be paid on or about September 1st, 1952, to holders of such shares of record at the close of business on Saturday, July 26th, 1952.

By order of the Board.

D. G. MILLER,
Secretary.

July 9th, 1952.
Winnipeg, Manitoba.

milk goes, of course, to supply the towns and for making cheese.

Cans of milk or cream are placed in a small cool room at the farm gate —alongside a bitumen road as often as not—where they are collected by the factory trucks. Districts are zoned to prevent the overlapping of collection areas. New Zealand butter and cheese factories are among the most efficient in the world, and are equipped with up-to-the-minute plants. Much of the equipment is manufactured locally; and some items, for example the Vacreation pasteurizer now widely used in North America, are New Zealand inventions.

premises, plant, or machinery. They may forbid further production until the defect is remedied, and condemn any produce they consider unfit for human consumption. Close supervision is exercised from milking-shed to ship's hold. The export of butter containing more than 16 per cent of water or less than 80 per cent of fat is illegal. So also is the export of cheese in which the water-free substance amounts to less than 50 per cent.

Though the New Zealand farmer often "grouses" about these "endless government restrictions" he gets much government aid. The State helps to maintain two agricultural colleges,

Wheat is harvested in South Island, New Zealand, before we begin seeding.

Another "local" technique adopted by other countries is that of controlled neutralization. Creams received at any dairy factory vary in regard to their acidity. This can be neutralized, of course, with an alkali, such as bicarbonate of soda. But overneutralized cream gives the butter an alkaline flavor unacceptable to the British consumer. So New Zealand scientists evolved a technique of neutralizing cream for commercial buttermaking by the use of a skilfully prepared chart.

SINCE the bulk of New Zealand's dairy produce is shipped to distant markets, its keeping quality receives the closest attention. By an Act of 1908, government inspectors are authorized to visit farm and factory premises. There they can order the correction of any defects in the cleanliness and sanitation of the

affiliated with the University of New Zealand, which provide advanced courses in the science and practice of farming. The Department of Agriculture's dairy division supervises the grading of butter and cheese. The fields division, besides conducting experiments, gives advice on crops, pastures, and farm management, and attends to the testing and certification of seed. There is a chemistry section, and a well-equipped laboratory for veterinary research.

Through pamphlets, bulletins, lectures, and its own "Journal of Agriculture," the department keeps farmers posted on all worthwhile developments, whether at home or aboard, relating to their industry. Even the elementary schools have their calf-rearing clubs, their crop-growing competitions, to foster rural interests, and to prevent any tendency for young people to "drift into the cities."

The Flying Mouse

Some interesting facts about the much maligned bat

by **JULIUS FRIESEN**

MAN has revered many animals in the days of his superstitions. He has given wings to heavenly beings and angelic spirits; envisioned bulls and horses with the pinions of birds. His imagination has conceived the most incongruous combinations of animal and spirit—always insisting on a winged being. Yet the only mammal on earth with wings and the power of flight has never been depicted as a heavenly spirit but has been compared to some medieval imp or devil. Only the Australian aborigines noticed the graceful flight of the bat. Man was to fly in the next world; the bat was the only animal example before them, so they named the bat as the recipient of their souls, and therefore sacred.

Undoubtedly the appearance of the bat earned it a demon's reputation. Deep-set, tiny eyes, elongated ears, leafy noses, corrugated chins, and the little pink bag of a mouth studded with sharp teeth, combine in a countenance of shuddering depravity. Evolutionary processes have deformed the limbs and appendages as well as facial features. Facial features may vary, color tones deepen from fawn to black, but all have mouse bodies. The

bat is really a mouse on wings, and the old Scotch name of flittermouse describes it exactly.

The superstitions involving the flittermouse are as common as backfence gossip on washday. One cause of its reputation is the habit of some South American bats which occasionally indulge in bloodsucking. This has led to the belief that all bats are vampires.

Actually the bloodsucking is neither violent nor frequent. It seems to have developed from the habit of fruit-sucking, as some tropical bats live mainly on fruit juices. It is not dangerous—mosquitoes are a greater and far more dangerous pest.

Another ungrateful slander is that the bat brings bedbugs into the house when entering to catch insects. Any bedbugs encountered would be speedily exterminated, for insects comprise the main diet of the bat. Furthermore, the bat is very particular about its personal cleanliness. His wash-cloth is the front part of his wings. He moistens this, then licks it clean after washing his face. He scratches the back of his head with his hind foot—then licks the foot clean. The wings are seized in the mouth and licked clean.

The most common misconception is that it will entangle itself in the hair of innocent victims at every opportunity. Actually the bat's perfection of flight is such that it can fly through branches and dark crevices with a finer sense of direction than feathered wings could emulate. One naturalist stretched a maze of threads across a room, then set loose a blinded bat. It flew about the room and never touched a thread! Leonard Dubkin, Chicago Tribune naturalist-writer, once had an albino bat which made a game of flying through the whirling blades of a fan rotating at 800 revolutions per minute.

Throughout the ages, for bats are of great antiquity, the bat has evolved a unique system of radar. All its outer organs are super-sensitive. The perception of nearness by keen smell, sight, and vibration is developed to a remarkable pitch. The nostrils, lips, ears and wing membrane are tuned to catch minute waves of vibration warning of insects or obstructions. For greater efficiency the surface areas of these physical features were increased by evolution, thereby producing the grotesque disfiguration and ugliness. The same evolution which has developed its perfect flight has handicapped its movements on the ground. Its walk is an ugly waddle on feet and elbows, with wings fluttering. The bat has a squeaky voice which is, nevertheless, expressive of different emotions. Some of its sounds are inaudible to the human ear, and according to two Harvard professors (Galambo and Griffin), these sounds are part of the bat's unique radar system.

THE short fur of the bat is like soft silk, but covers only his body and not his wings. The wing membrane is stretched between the elongated fingers of the front feet, somewhat like the web of a duck. The thin, rubbery membrane stretches between the long fingers and extends back to the hind ankles and up to the tip of the bony tail. The "thumb" of the front feet, or "hands" is a short hook that projects from the front angle of the wing. This hook is used to drag itself along the ground, or to scratch the back of its head. The wings are folded like a pocketknife. The hind legs support the wings, with the tiny emaciated foot projecting from the wing membrane. Five wire-like toes with sharp, hooked claws extend from the foot.

During the day the bat suspends itself upside down, hanging onto the branch of a tree or similar support. The knees of the hind legs bend in an opposite direction to that of human beings, making it possible for the bat to use the hind feet in holding insects. When a bat catches an insect in flight, it folds its wings and drops a few feet while holding its prey with the hind feet, deftly nipping off the insect's wings with its mouth.

The young are born in early summer, varying with the different climate zones of the world. They are suckled mouse-fashion, curled up in the mother's wings. Until their eyes are open, the young are taken along with the mother when she flies out at night to catch insects. During these rides the babies cling to their mother's neck. When the mother wishes to work unencumbered, she hangs the youngsters on a twig. On her return she deftly scoops up her offspring so gently that the twig is not even disturbed.

The youngsters make their first flight when they are about one month old. Thereafter they are practically self-dependent and catch their own food, though they still spend the days hanging head down with their family. By fall they are full grown, but during the winter they hibernate with the rest of the family.

Mainly a tropical animal, bats range south as far as Australia and north to the perennial ice in Canada. Canada has at least six species, most common being the blunt-nosed bat which ranges from the Pacific to the Atlantic and north to the Arctic Circle. It is also numerous in Asia and Europe. Little brown bats and big brown bats roam from the Rockies across the prairies, while the silver-haired bat lives among the perennial ice beyond the Arctic Circle. This is an instance of the universality of the flying mouse, so seldom seen and seldom valued at its true worth.

Soviet Collective Farms

THERE are said to be 240,000 collective farms in the U.S.S.R. The average farm is of 2,700 acres, on which there are 200 homes, or households, with an average of 13.5 acres each. The number of persons over 16 years of age working on the farm is about 300, in addition to about 100 children between 12 and 16, who help with the farm work.

The actual seeded acreage is about 1,400 acres and the workers are divided into brigades of from 35 to 40 persons. These again are broken down into squads. In addition to these field workers, there is a farm chairman, brigade leaders, an administrative staff, storekeepers, watchmen, guards and nursery employees.

The Black Horse

Continued from page 11

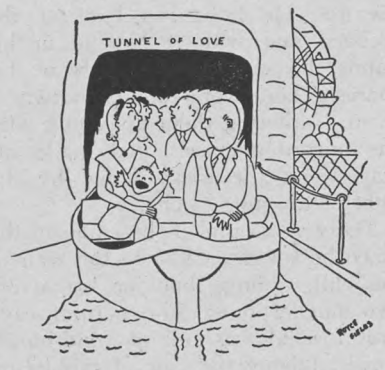
he walked toward the horse. The black horse tossed his head in puzzled wonderment, and made nervous little motions with his feet. Fifteen feet separated them, then ten feet. The horse shone like a mountain of muscle and strength. With a sudden blasting snort, he wheeled and thundered down the valley.

Jed sank to the ground. Perspiration covered his face. He had done what no other man in the hills had ever done, been unharmed in striking distance of the horse. But the horse was not a killer. If he were, Jed knew that he would not be alive now.

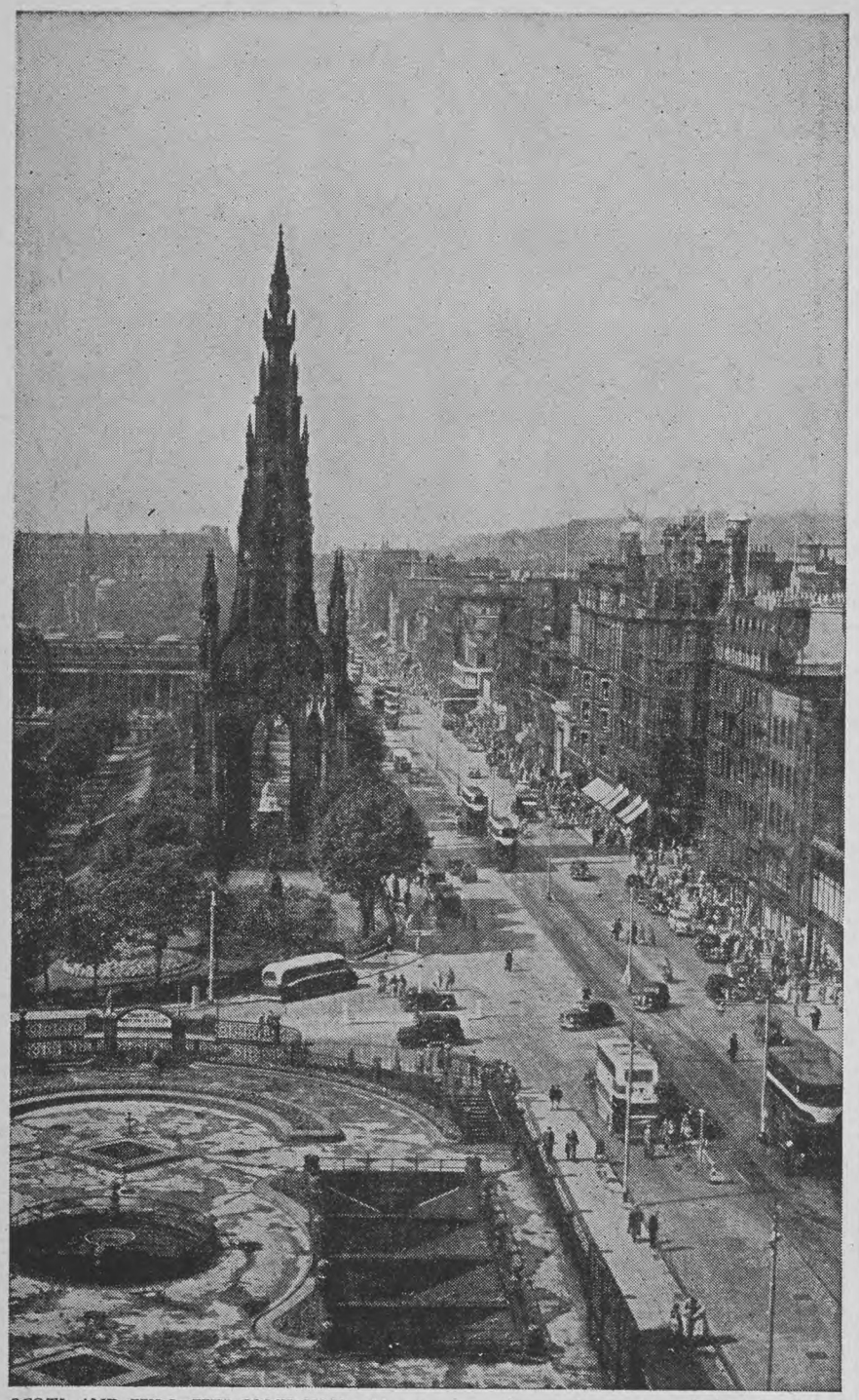
Jed took a fish line and hook from his pocket and picked some worms from the bottom of an overturned stone. He cut a willow pole with his sheath knife, and caught three trout from the stream. He built a fire, and broiled the fish over the flames. It was a fool's mission that he was on. He should be back among the stockmen, earning the money that would provide him with food during the winter to come. Deliberately, he ate the trout. Getting to his feet, he put the fire out, and struck off in the direction taken by the horse.

FOR another six days, he followed the black horse about the low hills. Jed rested when the horse rested, and went on when the horse moved again. For the six days, the horse stayed within a mile's radius of the small meadow where Jed had tried to approach him. Then, on the seventh day, moved by some unaccountable impulse within his massive head, the horse struck across the low hills, and did not stop at any of his customary grazing grounds. Patiently, Jed gathered up his coil of rope and followed. The horse had been foaled in Raglan's back pasture, and had somehow been overlooked in the fall round-up. They were, Jed guessed, travelling in a great circle, and within a month or six weeks would come to Raglan's pasture again. It was only at rare intervals that the black horse appeared at the pasture. His visits were always unwelcome. Numberless times, he had lured mares into the hills with him, and only with difficulty had they been recaptured.

All day he travelled without stopping. It marked the first day that Jed did not see the horse. He was a little fearful when he made his bed that night under a ledge of rocks, a dozen miles from where they had started. For two hours, he lay peering into the dark, unable to sleep. He did not own the horse, and could not catch him, and by spending his time following



"They must have remodelled since we went through on our honeymoon—it certainly doesn't seem the same!"



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Come to Britain

him was only making it certain that he would have to live all the next winter on boiled cornmeal, when he was lucky enough to get it.

He was up next morning with the first streak of dawn, and did not bother with a cooked meal. Some low-hanging June-berries served him for breakfast. He ate a few, and picked a great handful to eat as he walked. Only when he was again on the trail of the horse did he feel at ease.

At twilight, he found the horse again. He was quietly grazing in the bottom of a low and rocky ravine. Jed lay on top of the ravine and watched him. He had never been in this country before, and did not like it. The valleys were not the gently sloping ones of the low hills he had just left. It was a place of rocks, of steep ravines and, oddly enough, swamps. The creeks here were slow and muddy, a good country to stay out of.

With night, Jed moved a quarter-mile back from the lip of the ravine and built a fire. He supped on berries, but rabbit signs were plentiful. With his knife, he cut a yard from the end of his rope and unbraided it. Within a hundred yards of his fire, he set a dozen snares, and curled on the ground beside the fire to sleep.

HE awoke in the middle of the night. The air was cool. A high wind soared across the rocky ledge upon which he slept. Thunder rolled in the sky, the night was made fearfully alight by flashes of lightning. Jed picked up a fat pine knot that dripped sticky pitch, and stirred the embers of his fire. He lighted a knot at the embers, and with it blazing in his hands, he made the rounds of his snares. There were rabbits in two of them. Gathering them up, along with the unsprung snares, Jed made his way along the rocky ledge by the light of the pine torch.

Halfway around it, he came to the place he sought. Close to the wall of the cliff, a huge boulder lay across two smaller ones. The natural cave thus formed was full of wind-blown leaves. Laying the pair of rabbits on top of the rock, Jed crawled in among the leaves, and in a few seconds was fast asleep.

The second time, he awoke in a wet world. Torrential rain had fallen while he slept. The sluggish stream that he could see from his retreat flowed out of its banks. Every leaf on every tree dripped water. A light rain still fell. Jed shrugged, and turned back to the cave. He built a fire in the dry leaves, and fed it with wood that he split with his knife so it would burn. When both the rabbits were cooked and eaten, he wound the rope about him and set out to look for the black horse.

The horse was not in the same ravine where Jed had seen him last night. Jed glanced at the steep wall of the ravine, and at the swamp at its mouth. The horse could neither climb one, nor cross the other. Jed walked along the edge of the ravine. Descending into it when he did not have to would be both hard work and unnecessary. At the head of the ravine, where it ran onto the summit of the hill, he found the horse's tracks. He followed them.

For five miles, the horse walked across the level top of the hill. Finally, between a cleft in its rocky side, he went down into another of the steep little ravines. There was a trail five

feet wide where he had half-walked, half-slid down.

The rain had stopped, but a wind still blew. Jed stood at the top of the path where the horse had gone down, and watched it critically. The walls of the ravine were 40 feet high and steep. At the bottom, it was scarcely 20 feet across.

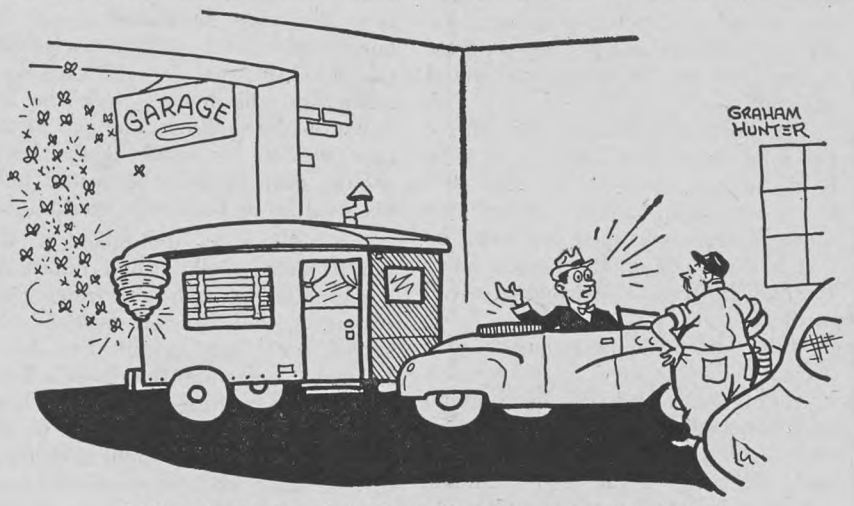
Jed worked his way along the rim of the ravine toward the mouth. He would descend into it ahead of the horse, and chase him up the ravine to the safe travel on top.

WHERE the ravine led into the main valley was another of the dismal swamps, a big one this time, fully a mile across, and it ran as far up and down the main valley as Jed was able to see. The black horse stood at the edge of the swamp, pawing the soft ground anxiously with a front hoof. Jed watched as he galloped a few yards up the grassland floor of the ravine, then turned to test the swamp again.

For the first time since he had been following him, Jed saw the black horse worried. He peered anxiously about. Somewhere in the ravine was an enemy that he could not see. There were rattlesnakes and copperheads to be found in great numbers, in just such places, but the black horse was snakewise, he could avoid these. Occasionally, a wandering cougar was known to cross the hills, and to take a colt or calf from the stockmen's herds. That must be it. A big cougar might possibly be able to fasten itself on the horse's back and to kill it with fangs and claws.

Ten feet below him, a little ledge jutted out from the side of the ravine. Jed doubled his rope about a tree, and slid down. It was excruciatingly painful work. For several seconds after he gained the ledge, he lay gasping for breath.

At a blasting neigh of terror from the horse, he crawled to the edge of the ledge and looked over, below him, the black horse stood with his head



"My motor's fine, but the trailer's got a funny sound."

thrown erect, his nostrils flaring, his eyes reflecting the terror he felt. Jed yanked the rope down to him and looped it over a rock. The horse was in danger, he had to get to him. A cougar would run from a man, even such a man as himself.

For 15 painful feet, he struggled down the face of the ravine. His crippled leg sent spasms of pain shooting over his entire body. Grimly, he held on. Five feet more, he descended. Then, his body proved unequal to the task his mind had set it to do. He lost his hold on the rope, and landed in a heap at the bottom of the ravine.

He sat up to look about. Ten feet in front of him, the black horse stood rigid, staring up the ravine.

Jed shook his head to clear it, and took his knife from its sheath. There was no time now for anything more, save finding and dispatching whatever nameless terror beset the horse. He rose to his feet, by sheer will power putting strength into his legs. When he walked up the ravine, he passed so close to the black horse that he might have reached out and touched him, if he had wanted to. The horse merely sidestepped a few paces, and followed him with questioning eyes.

The cougar would now either attack or slink away. Walking slowly, searching every ledge with his eyes and missing nothing, Jed advanced. He could not see anything. But there was a sinister thing here that could be neither seen nor heard, only sensed. The air was growing more gushy; pebbles rattled into the ravine. Jed glanced anxiously back over his shoulder. If somehow he had missed the enemy and it had got behind him to attack the horse . . . But the black horse still stood; to all appearance, he had not moved a muscle.

Suddenly, the silence broke. The black horse screamed, a long and chilling blast of roar. There came the pound of his hoofs as he fled back down the ravine. Jed heard him splashing into the swamp. Simultaneously, there came a deep-throated rumble from up the ravine, as a huge boulder loosed its hold on the canyon's lip to thunder down the side. It gathered others as it rolled. There was a staccato rattling as shale mingled with the avalanche.

Jed sheathed his knife. Within a minute, everything was over. A pall of shale dust hung over the ravine, but that was wafted away by its own weight. The avalanche, then, was the enemy. Animal instinct had told the horse that the wind would set the slide off. The ravine was blocked by a wall of rock and shale to a third of its height. Great boulders, that he could never move, were wedged in the shale. A man could get over it, but the black horse, never. With a shrug, Jed turned back to the swamp and to the horse.

THE horse was a raving-mad thing. Ten feet from the rocky floor of the ravine, he struggled in the grip of the

GOVERNMENT OF THE PROVINCE OF SASKATCHEWAN
DEPARTMENT OF MUNICIPAL AFFAIRS
Local Improvement Districts Branch

NOTICE

UNDER THE LOCAL IMPROVEMENT DISTRICTS ACT, 1946

Notice is hereby given that if all arrears of taxes imposed prior to the First day of January in respect to any parcel of land situated within Local Improvement Districts Nos. 920, 923, 926, 929, 932, 938, 941, 944, 947, 950, 959, 962, 965, 968, 971, 974, 980, 983, 986, 989, are not paid on or before the Fifteenth day of October next, such land will be dealt with under the provisions of Sections 69 to 77 of the Local Improvement Districts Act, 1946, with a view to obtaining title in the name of Her Majesty in respect to such parcel.

DATED this first day of August, 1952.

JOHN McINTOSH,
Deputy Minister of Municipal Affairs.

swamp mud that was already up to his belly. His breath came in agonized gasps as he strove with all his mighty strength to free himself of the slimy hand of the swamp. Slowly, inexorably, he sank. As Jed watched, he flung himself four inches out of the mud, and fell back again, to sink deeper.

Jed walked into the swamp. It sucked at his bare feet, and sighed because it could not grip them. If he kept out of holes and stepped on grass tussocks where he could, he would not sink.

The horse was fast in the grip of the mud when Jed reached its side. It could not move a leg, but still tossed its head wildly. A sublime sense of elation gripped Jed when he first laid a hand on the horse's back. He had, he felt, at last known a full moment in his life.

"Easy, old boy," he crooned, "take it easy."

The horse swung his head about and knocked him sprawling in the mud. Coolly, Jed picked himself up to walk back to the mired animal. Kneeling by the horse's shoulder, he ran his hand slowly up its neck.

"Don't be worried, horse," he pleaded. "Don't fight so, old fellow. I'll get you out."

Wildly, the black horse struggled. Slowly, carefully, making no move that might alarm, Jed scratched his neck and talked to him. Finally, the black horse stopped his insane thrashing and held his head still. Calmly, Jed walked to the front of him. Instantly, the black horse closed his jaws on Jed's arm. Jed gritted his teeth as the horse squeezed, but his free hand played soothingly around the animal's ears.

The horse unclenched his jaws. He pressed his muzzle against Jed's mud-caked body and smelled him over. Jed grinned happily. The black horse and he were acquainted. Now he could go to work.

The frenzied flight of the black horse had carried him a dozen feet from the floor of the ravine, and left him facing into the swamp. Still keeping up his murmuring undertone, Jed studied the situation. He had no lifts or hoists, and no way of getting any. It was useless for him to try to pit his own strength against the sucking sand. Likewise, there was no way whatever to make the horse obey his commands, and first he would have to get him facing back toward the ravine.

WITH his knife, Jed set to work by the horse's side. When the carpet of grass on top of the mud had been cut away, he could dig faster with his hands, but as soon as he scooped out a handful of mud, another handful seeped in to take its place. Jed took off his shirt, and returned to the ravine, where he filled it with loose shale from the rock slide. As soon as he scooped away a handful of mud, he packed the remaining wall with shale. That held. The horse moved against the wall, as soon as Jed made enough room for him to move. Jed was much encouraged when dark stopped the work. After eight hours of steady labor, the horse had been turned about at least six inches.

In the last faint light of day, Jed returned to the ravine and got the coil of rope. The night would be a bad time. He did not think the horse could sink any deeper, but if he became panicky again, he might easily render useless all the work done. With his knife, Jed hacked off a dozen slender saplings, and carried them back along with the coil of rope. The black horse turned his head to watch when Jed started back to where he was; almost, it seemed that he was glad of company. He threw the saplings down beside the horse; they were to be his bed. The rope he passed about the horse's neck, and made a hackamore that fitted over his jaw. With his head resting on the horse's back, he lay down on the saplings. The end of the rope was in his hand. If the horse should start to sink, he would hold his head up as long as he could.

All night long, Jed talked to the mired horse. Calling him endearing names, soothing him with quiet voice whenever he became restless, he stayed with him. A full two hours he spent caressing the horse's head with his mud-torn hands. An hour before dawn, he went again to the bottom of the ravine. Light of day was just breaking when he scrambled over the rock slide. He picked a great armful of the wild grass that grew in patches on the other side of the slide, and carried it to the horse. Half of it, he threw in front of him, but when the animal had eaten that he took the rest from Jed's hand.

Doggedly, Jed set to work with his knife. It was devastatingly slow work. Take out as much mud as he could, and pack the sides with shale. Heedless of time, he worked on, making countless trips to the slide for more shale. Before the sun was set, the black horse was again facing toward the ravine. Furiously, he plunged to reach the firm earth. Jed quieted him, the time had not yet come to make the test.

JED slept again beside the horse. When morning came, he once more scaled the slide to get him grass, then he resumed his digging. He worked from a different angle this time. It was scarcely ten feet to stony footing. A yard in front of the horse's feet, he filled the hole with rocks and shale, and packed the sides with shale alone. As the day wore on, he gradually worked up to the horse's breast. Two hours before sunset, all was ready.

In front of the black horse was a ramp of shale and rocks, a foot high, a yard long and four feet wide. Jed took the rope, one end of which still formed the hackamore, and ran it into the ravine. He returned to the horse. With his knife and hands, he scraped the mud away from one of his mired front legs. As soon as the pressure eased, the horse brought the freed leg to rest on the ramp, and raised his entire body two inches from the mud.

Jed ran back to the ravine. Taking the rope in both hands, he pulled gently but steadily. The horse fought the rope a minute before he yielded to it. With a prodigious effort, he placed his other forefoot on the ramp, and arching his back, he sent all the elastic strength of its muscles into his mired rear quarters. Jed heaved madly on the rope. The horse cleared the ramp with both front legs; for the first time, his belly was clear of the mud. Jed gritted his teeth and pulled. The horse's hind hoofs slid on the ramp. He leaped, and threw himself a yard through the mud. His front feet found

a wisp of hard footing, he pawed wildly. A second later, the black horse scrambled to the stony floor of the ravine.

JED fell back to the floor of the ravine, and for a few seconds yielded to the fatigue that was upon him. He had slept little, and eaten nothing in almost three days. Dimly, he was aware of an immense black beast standing over him, pushing him with its muzzle, and nibbling him with its lips.

The horse's mane fell about him. Jed grasped it and pulled himself erect. He could not rest—yet. The black horse followed close behind him. He nickered anxiously when Jed climbed over the slide, and pranced playfully when he came back, his arms laden with wild grass.

Half the grass, Jed left on top of the slide, the rest he carried into the

"I'm sorry, Barnsby," but we can't buy from you any more. She looks awfully discontented to me!"

ravine with him. He took away the hackamore as the horse ate, and fashioned a breast strap in the end of the rope. With utter freedom, he dodged under the horse's neck and arranged the crude harness. Then he climbed to the top of the rocks for the rest of the grass.

Jed shook his head worriedly as he surveyed the slide; a good team could not move some of the boulders in it. But perhaps the black horse . . . He banished fear from his mind as he hitched the free end of the rope about one of the boulders, and with the grass in his arms, went to the head of the horse.

He patted the horse's head as it pulled at the hay in his arms. Slowly, he backed away. The horse followed, and the rope stretched taut. The black horse stopped, and swung his head as he edged nervously sidewise. Jed gasped. If the horse fought the harness now, he could never get it on him again, and he could never get him out of the ravine. Jed stepped close to the horse.

"This way, horse," he murmured. "Look this way. You can do it, horse. Come this way."

He stepped back again, the grass held out invitingly. The black horse trembled, and took a step forward. Pebbles flew from beneath his hoofs as he gave all his enormous strength to the task in hand. The tight rope hummed. The boulder moved an inch—six inches. Then, in a steady creeping that did not stop at all, it came away from the pile.

A WEEK later, a great black horse appeared in the upper pasture where Tom Raglan was counting his colts. The horse stopped while the tiny, emaciated figure of a man slid from his back. Incredulously, Raglan approached them. The horse stood fearlessly behind the wasted man.

"You got him, Jed," Raglan said.

Raglan was no waster of words, but words were not needed. He was unable to tear his eyes away from the horse's massive legs, his splendid head, his flawless body, all the qualities that had here combined to form the perfect living thing.

"I got him, Tom," Jed Hale said, "and I brought him back like I said I would."

Raglan coughed hesitantly. Above all else, he was a horseman. There was no need for Jed to tell him of the chase, or how the horse had been captured. Jed's sunken eyes, his skeleton body, his tattered clothes, the finger from which the nail had been torn, told that story for those who could read. There was a world of difference between himself, the successful stockman, and Jed, the crippled stable hand. But they were brothers by a common bond—the love of a good horse. Raglan coughed again. Jed had indeed brought the horse back, but by all the rules known, the black horse could belong only to one man, the man who had brought him back.

"Jed," Raglan said slowly. "I never went back on my word yet, and I'll stick by the bargain I made. But that horse is no good to me." Jed stood without speaking.

"He'd kill anybody except you that tried to monkey 'round him," Raglan continued. "I can't risk that. But I'll go a long way to get his blood in my stock. Now, there's a house and barn in my north pasture. I'll give both of 'em to you along with 50 acres of ground, if you'll take that horse up there and let me turn my best mares in with him. I can pay you $30 a month, and you can keep every seventh colt. Do you think you'd just as soon do that, as to have the $500?"

Jed Hale gasped, and put a hand against the black horse's withers to steady himself. The black horse laid his muzzle against Jed's shoulder. Jed encircled it with an arm. The black horse, the horse that could do anything, was his now. It was a little too much to stand all at once. Suddenly, Jed remembered that he was now a hard-boiled stock owner.

"Why, yes," he said finally. "If that's the way you'd rather have it, Tom, yes. I guess I'd just as soon."

The Countrywoman

Some bits and pieces concerning people whose contributions in various ways add color and interest to the Canadian way of life

by **AMY J. ROE**

NOT the least of the satisfactions, of one who attempts to sit at an editorial desk, is the opportunity to introduce Canadians to one another and to each other's work and opinions. The communication of ideas is a responsibility of the press, which should not be taken lightly. The impressions left are more lasting than those provided by radio or films.

Through the medium of the printed page much can be done to bring stories of people and individual achievement in the provinces to the attention of this far-flung nation. As we familiarize ourselves with the various and varied members of the nation-family, as expressed through their life, thought and work, we gain in appreciation and understanding of the many characteristics which go to make up the Canadian way of life.

Our horizon is pushed back, our understanding broadened through the traveller's tale and observations of other folk and other lands. Though we may not stir from our own cozy reading corner beside an evening lamp, we may benefit by the experience of another who has ventured far.

Learning about people, in our own homeland, perhaps rather like ourselves but differing in their ideas, ways of doing or making, their aims and accomplishments, has a special significance. Such information may provide the thoughtful person with a new slant on current affairs, a solution to some old problem or a desired incentive to tackle a new and pressing one.

Some fleeting bit of verse, an apt expression of sentiment or of an attitude toward life may warm the heart or color our thinking for many days to come. Our minds are enriched, our sympathies deepened with a consequent sense of sharing and identification with fellow Canadians in the stream of thought of our time.

Margaret Ecker Francis

MARGARET ECKER and Robert Francis are a husband-and-wife, free-lance writing team, whose work has become familiar to Canadians from coast to coast. Since the end of the war, they have travelled together to many spots of interest in Canada, Europe, Fiji and Australia.

Last year they flew off to Australia on a story hunt. Margaret Ecker Francis, on the special request wrote two feature articles for The Country Guide: one about the Country Women's organization and its work and the other entitled Homemaking Down Under. In this issue we are happy to have another feature story from her on some of the interesting and unusual features of the world-famous zoo, near Sidney.

Margaret Ecker was born in Edmonton, Alberta. She attended the University of British Columbia and on graduation joined the staff of the Vancouver Daily Province. In 1941 she married Robert Francis and moved to Montreal where he was news editor and later feature editor of the British United Press. Later they moved to Ottawa, where both worked for the Canadian Press news service, where they "covered" the House of Commons and did feature article writing. Robert joined the R.C.A.F. and was sent overseas. Margaret followed him to Britain as a war correspondent for CP. As an accredited and experienced representative of a leading news service, she was "on the spot" when stirring and important events were taking place. She landed in Normandy shortly after D Day and followed the Canadian forces through France, Belgium, Holland and Germany, covering the liberation of Paris. She was the only woman present at the signing of the Armistice at Rheims. Those who were fortunate enough to be present at that event were the envy of other press reporters and photographers because the representation was necessarily strictly limited.

Margaret Ecker Francis was honored by Queen Wilhelmina for the news coverage of the Netherlands, by being made an officer of the House of Orange. On her return to Canada she continued writing feature and news articles. Twice she has received the Canadian Women's Press Club Memorial Award which is made for outstanding writing, based on factual material.

An Honored Centerpiece

IN the April issue, readers of The Country Guide were introduced to Atlanta Sollows of St. John, N.B. Miss Sollows, confined to her rooms because of physical handicap and ill-health, keeps her mind alert, her skillful hands occupied in writing books and collecting sea shells. She makes those shells into attractive and amusing figures. She has written to say that, as a result of the article by Vera L. Daye, she has received daily many letters from people in all walks of life, across Canada. Visitors, some from the prairies, have dropped into her studio to see her collection and to inquire about her books.

Sea shell Pond Lilies made for Princess Elizabeth and Prince Phillip in 1951 by Atlanta Sollows, of Saint John, N.B.

The illustration on this page shows a water lily, table centerpiece made from shells by Miss Sollows. The lilies are life-size in lovely shades of cream, yellow, orange and pink, with the pads done in oils in soft greens. "They are so natural, just as I have picked them many times and there is a tiny bull frog, which actually croaks when you stroke his back, resting among the leaves," writes Vera L. Daye.

There is a story about the destination of the lily center.

At the time of preparations for the wedding of Princess Elizabeth and the Duke of Edinburgh, Miss Sollows made a "Wedding In Shells" piece with the thought that she might send it as a gift from a loyal and loving subject. A friendly sea captain, who admired Miss Sollows' work, carried it in the cabin of his ship across the Atlantic and delivered it in person right to the door of Buckingham Palace. It was accepted and courteously acknowledged. Atlanta Sollows later had the happy experience of hearing Claire Wallace, noted radio commentator, mention having seen this piece made by a Canadian woman, among the royal gifts in St. James Palace.

On the occasion of the visit of Their Royal Highnesses, Princess Elizabeth and the Duke of Edinburgh, last October, Miss Sollows had lovingly and carefully worked over another piece which she thought might be offered as a souvenir. And so she created the quaint and beautiful centerpiece.

But there were of necessity definite restrictions on individual gifts to royalty on an official visit. Nevertheless she finished it, added separate pieces —a four-inch penguin standing on a bright yellow base for Prince Charles and a sad-eyed kitten from Siam in shells for Princess Anne. They were packed in a box two feet square and a foot deep, colored in old blue and tied with white satin ribbon, with a card signed "your humble servant."

One of the members in the royal party, who had seen the "Wedding In Shells," had learned that Miss Sollows had hoped that she might offer another shell piece. The box was sent for by the Duke of Edinburgh and placed on the train in Princess Elizabeth's room just shortly before the train left the city. A "thank you" note came within a week after the royal party had returned to England.

Good Homes

"THE greatest things of life are so simple as to defy definition," Harold Weir, of the Vancouver Sun, told the 11th biennial convention of the British Columbia Women's Institutes, "and greatest among them is the family. The individual is static, the family progressive. Society must be dynamic and self-expansive in order to exist. The destruction of the family means the destruction of society."

The speaker referred to the determined effort of the Spartans to abolish the home for the benefit of the state. By taking children away from their mothers while very young and bringing them up in barracks under the strictest military discipline, it was found possible to create armies of brutal robot soldiers, who feared nothing nor no one. "But they were without souls and had nothing left for which to fight.

"The individual is the unit for religious, but the family for social purposes," he continued. "The family is based on affection, cohesian and loyalty; qualities which must come from the bottom up and leaven the whole. It is the ultimate unit of society.

"Extending that unit, all the people and the institutions of the province are in a true sense a family. On a broader plane, but still through the powerful influence of family life, the royal family has become a great cohesive force in the Commonwealth." Mr. Weir recalled witnessing the trooping of the colors, when King George VI was crowned and described the gathering of the immense crowd and the arrival of the dignitaries. Then a great silence fell on all the people, until nothing could be heard but the clomp, clomp, clomp of the horses' hooves. Members of the royal family were approaching.

"These people were there from love, not just patriotism," he declared. "The family is a miniature of heaven because it is based on love."—Gilean Douglas.

Pause in Twilight

What could there ever be
That is more than the last light falling
On silence; more than the wood thrush calling
Into tranquility?

Pity the sun-spilled day
That is never brimmed with the flowing
Of owl-wing hush in the growing
Dusk on the river way.

—Gilean Douglas.

Applied Animal Psychology

Wallabies in Taronga Park are friendly to Canadian writer.

In Australia's large and famous zoo, Taronga Park, is to be found one of the world's most unusual collections of animals, birds, fish, and reptiles, settled down to a healthy, well-adjusted life in captivity, under the direction of a curator who has studied the needs of its inhabitants

by MARGARET ECKER FRANCIS

APPLIED animal psychology is paying dividends in Australia at Sydney's 42-acre parklike zoo, Taronga Park, both in pounds sterling and in wild life welfare.

Hundreds of thousands of people annually pilgrimage to the zoo, to wander over its terraces and stare at the inmates. For this privilege, the visitors pay annually £A85,000, approximately $212,500. This sum makes almost self-supporting one of the world's most unusual collections of animals, birds, fish and reptiles.

Here is a zoo in which the visitor will find that the same psychological principles and studies are being applied to each of the 4,200 creatures there, as he applies to the upbringing of his own children.

Each individual, be it fish, fowl, reptile or animal, has been studied for its individual psychological need of a sense of security. When this is provided even the treacherous leopard and elusive platypus settles down in captivity to a happy, well-adjusted life.

The inhabitants of Taronga Park live much longer than do the inhabitants of most zoos; longer, in fact, than they would in the wild state. Animals seldom bred in captivity, at Taronga are producing healthy, vigorous young.

The secret is applied animal psychology.

"We study all animals as individuals," explained curator Dr. J. A. Conenradd. "We find out what gives each a sense of security, and then we provide that environment."

It was thought impossible once to breed hyenas in captivity. After study it was discovered that the female hyena destroyed her young at birth because she lacked the sense of security she would have had in her native habitat. There she bears and rears her young in a maternity passage, a long narrow tunnel. While the mother cares for the young, the father mounts guard outside, and provides food for his family. In zoos formerly, it was customary to separate the mates during this period.

At Taronga a burrow was provided resembling as much as possible a hyena burrow in the wilds. Although the animals are so vicious that a keeper cannot enter their lair, the mother bore her young, while the father guarded and fed the brood. Secure in their surroundings, neither animal attempted to destroy the cubs.

THE cumbersome, awkward brush turkeys at one time refused to hatch their enormous eggs in the confines of a zoo. Study revealed that since the eggs are too large to be sat upon, the hen was neglecting them and the chicks inside were perishing. Expeditions into the bush country of Australia discovered that there the eggs are laid in a place providing loose earth and a supply of mouldy leaves.

When this environment was duplicated at Taronga, the cock immediately built from these materials, a mound, several feet high. The hen laid her eggs in a hollow at the top of the mound, and the cock began his vigil. If he felt the eggs were too warm, he scratched away some of the mould and earth from around them. He covered them deeper if the atmosphere cooled. Sometimes the eggs are two feet below the surface, where the heating action of the decaying leaves helps to hatch them. Then the cock carefully digs them from their bird-made incubator, when the proper time comes.

That living fossil, the egg-laying platypus, fantastic combination of repile, fish, bird and mammal, until recently was being slaughtered in millions for its exquisite seal-like fur. As the species threatened to become extinct, attempts were made to preserve specimens in zoos, with no success, until at Taronga, watchful zoologists began duplicating the natural conditions under which the platypus normally lives.

Soft earth was provided in which the female could dig herself a burrow, arched to the shape of her body. As if living on the bank of a river, her natural habitat, she then lined a nesting chamber at the end of the burrow with grasses, leaves and reeds crushed to a pulp in her own toothless, but bony, jaws.

When the time had come, she retired to her maternity chamber, plugging the burrow at intervals behind her. Then her sense of security complete she laid her tiny, leathery eggs and curled herself around them until they hatched 14 days later. Strong light and hubbub causes psychological disturbances to the platypus, which may result in his death. At Taronga a large stone-roofed enclosure has been provided for these primitive mammals and they seldom emerge except at night.

When various types of both animals and birds habitually destroyed their young at Taronga, careful study revealed that sex introversion had taken place. The female, eager to breed again, was ridding herself of the impeding offspring. In some such cases, an injection of hormones retarded the sex urge. In other cases, the young were separated from the mother and reared by the keepers.

Even fish have their own psychologic reaction. Certain varieties refuse to breed, or die, when their watery environment gives them what is considered a piscatorial sense of insecurity. At Taronga the fish tanks are filled with water from the mid-ocean. Only one variety is placed in each tank, and chemical analysis shows these fish immediately begin to adapt this water to their needs. There they breed and flourish, but an alien fish introduced into the tank, being maladjusted to this environment, often dies.

A ZOO then, like Taronga, that studies so closely the needs of its inhabitants, cannot be termed cruel.

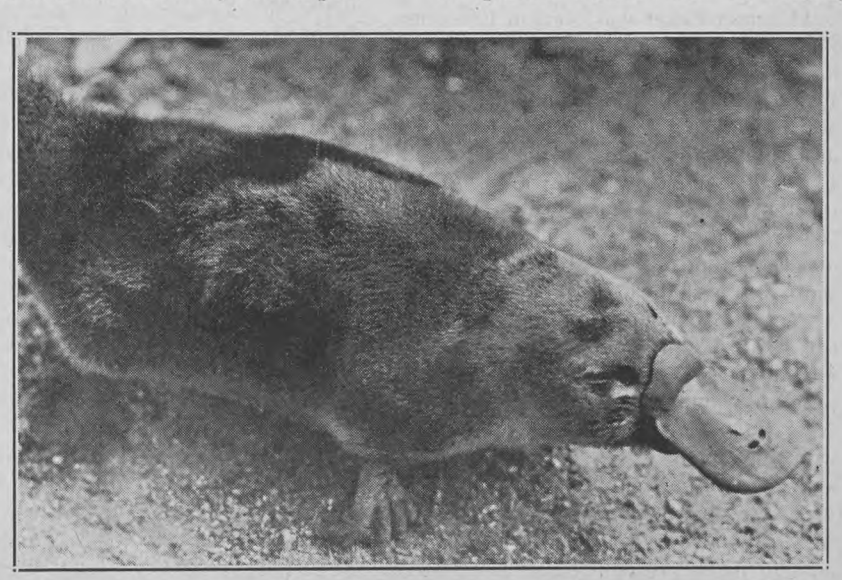
"No indeed," protested Dr. Conenradd who has studied animal psychology in his native Holland, as well as all over the world.

"An animal, bird, fish or reptile, in its wild state, leads a most hazardous life. If it becomes sick or injured, it is eaten by something stronger than itself. If epidemic strikes, the animals die. Our animals, with medical attention provided, live much longer, happier lives than they would in the wild state.

In every keeper's pocket is a hypodermic of penicillin, as well as administrations of sulpha and aureomicin. All keepers are trained in the use of these drugs and an ailing animal receives instant attention.

As Dr. Conenradd and his associates see it, an animal, to lead a happy, healthy life, requires the all-important sense of security, the proper food and sex. When these are provided, it has no sense of captivity, develops no psychosis from the loss of its freedom.

"We must beware of anthropomorphism," said the curator. "That is, putting human ideas into animals' heads, or attributing human characteristics and feelings to animals who do not possess them. When an animal,



The platypus, strange and almost extinct creature, is a contented dweller.

who feels secure, finds food and sex within his reach, he feels no desire to roam, to leave the place that provides these things."

Their enclosures are set amongst a grove of trees, and when they look up there are no iron bars, only the leaves between them and the free sky. All around them are brilliantly colored tropical flowers. There are no cages, and the purpose of the low fences is to protect animals chiefly from their visitors.

Lions, leopards and tigers pace in large, deep pits, whose sides are hewn into ledges, and caves leading into the pens. Such "pouncing" animals as these need the shelter of dark, cool lairs. Without these, and high ledges, from which they can survey the world, they develop psychosomatic troubles, manifest in languor and loss of appetite.

THE almost extinct Pere David deer, of which a few were preserved, live in marshy enclosures with no fences on which they could hurt themselves. Their spread hoof reveals that when these animals did exist centuries ago they required marshy land for health. At night these animals, friendly and docile in the daytime, like many other such animals, suffer a personality change.

The instinct to flee at the slightest noise becomes overpowering, so enclosures must be provided without fences on which they would harm themselves in their panic.

Dr. Conenradd does not attach too much importance to an animal's need for love and affection, but his attitude toward his charges would seem to be some part of his success with them. Even the horny, uninviting rhinoceros seems to wait for his daily visit. She presses her blunt snout through the bars of her pen when she hears his voice and gives off a low, mewing sound, a ridiculous call coming from such a grotesque creature. Expectantly she opens menacing-appearing jaws and the curator rubs her gums. Happily she sucks his fingers and mews like a contented kitten.

The shoe-bill, a large, black-beaked tropical bird, with sad, spaniel eyes, hears him coming and clacks what sounds for all the world like "Hello."

"He's lonely, likes someone to talk to," explains the zoologist, and they spend a few minutes in conversation, the bird answering the man as if he understood.

The flamingoes preen their long-legged selves for him, because it was his idea to feed them carrots and

(*Please turn to page* 52)

The Currant Season

Use currants from the garden for a fruit pie now, for winter jams and jellies

WHILE the red and black currants are still ripening on the bushes treat the family to a fresh currant pie or an upside-down cake. The tart flavor of currants add just the right tang to meals these warm August days. Serve them, too, as a fruit sauce with pancakes, milk desserts or gelatin dishes. Then can the surplus to be used this winter as jelly with veal or fowl, as jam with toast for breakfast, or canned solid for pies and puddings.

Both red and black currants are extra rich in vitamin C, that health-giving vitamin usually supplied by our morning orange or grapefruit juice. A tablespoon of black currant jam will supply a large part of the day's requirements and a half-cup of red currants supplies as much vitamin C as an orange or half grapefruit.

When making jelly wash the berries but do not take time to remove the stems or the blossom end of the berry. Leave the dried blossom on the black currants for jam, too, if you wish.

Red Currant Jelly

2 *qts. currants*
1 *c. water*
Sugar

Pick over and wash currants. Do not remove stems. Add water. Cover and simmer for 15 minutes. Let drain in jelly bag overnight. Measure juice. Bring to boiling point and boil 5 minutes; add ¾ c. sugar for each cup of juice. Bring to boil again and boil 3 minutes. Test for jelly. Pour into hot, sterile jelly glasses and cover with melted paraffin.

Black Currant Jam

4 *c. black currants*
2 *c. water*
3 *c. sugar*

Wash currants; add water; bring to boil. Boil uncovered until soft (10 minutes). Add sugar gradually, stirring to dissolve; boil briskly 8 minutes, stirring to prevent scorching. Pour into sterilized jelly glasses. Seal with hot paraffin.

Red Currant Jam

4 *c. currants*
4 *c. water*
Sugar

Wash currants; add water and cook slowly until soft. Measure cooked fruit. Add ¾ c. sugar for each cup. Boil 3 minutes or until gives jelly test.

Raspberry and Red Currant Jelly

4 *qts. raspberries*
2 *qts. currants*
1 *qt. water*
Sugar

Wash currants; add water and boil until juice from currants is extracted. Strain through jelly bag. Clean raspberries well; mash. Bring to boiling point and cook slowly until soft. Pour into jelly bag; drain thoroughly. Measure juice. Bring to boil; then for each cup of juice add ¾ c. sugar. Boil briskly to jellying stage; test frequently as currants are rich in pectin and it may take only 5 minutes.

Mixed Jam

4 *c. pitted cherries*
4 *c. gooseberries*
4 *c. red currants*
4 *c. raspberries*
8 *c. sugar*

Wash fruit. Combine fruit, crush slightly, bring to boil and boil uncovered 15 minutes. Add sugar, bring to boil and boil uncovered to jam stage, 10 to 12 minutes. Pour into hot, sterilized jars. Cool and seal.

Canned Red Currants for Pies

Wash currants, allowing about 3 c. berries for pint sealer. Pack sterilized jars with berries, crushing them down slightly. Add a very little water to fill jar to within 1 inch of top. Adjust sterilized rubber rings and tops. Partially seal and process 20 minutes in hot water bath or 10 minutes in the pressure cooker at 5 lbs. pressure.

Currant Pie

3 *c. currants*
1½ *c. sugar*
½ *tsp. salt*
3 *T. quick-cooking tapioca*

Make up a 2-cup pastry recipe. Roll out a 9-inch pie shell. Wash currants or use 2 c. berries canned solid without sugar. Mix sugar, tapioca and salt. Add to slightly crushed berries. Stir until berries are coated. Pour into pie shell. Top with lattice of pastry. Bake at 425° F. for 10 minutes, then reduce heat to 350° F. and bake 30 minutes longer or until set in center. Serve with whipped cream.

Currant Upside-Down Cake

¼ *c. butter*
2 *c. sugar*
1½ *c. currants*
½ *tsp. salt*
⅓ *c. water or currant juice*
3 *eggs*
1 *c. sifted cake flour*
1 *tsp. baking powder*

Melt butter in 9-inch baking pan. Add 1 c. sugar; mix and spread over bottom of pan. Pour in currants or use 1 large c. of currants canned solid without sugar. Beat egg yolks until thick and lemon colored. Add remaining cup of sugar gradually; stir in currant juice. Sift together flour, salt and baking powder. Fold into egg yolk mixture. Beat egg whites stiff and fold into batter. Pour over currants and bake in 350° F. oven 50 to 55 minutes. Serve with whipped cream.

Currant Sauce

2 *c. currants*
½ *c. water*
¾ *c. sugar*
2 *T. cornstarch*

Bring water to boil; add sugar and simmer 5 minutes. Add currants that have been washed and stemmed or use canned currants with syrup from jar. Make a paste of cornstarch in ¼ c. cold water. Add to cooked currants. Cook until thin and clear (10 minutes). Serve with Swedish pancakes for supper dessert.

Swedish Pancakes

1 *c. flour*
1 *T. sugar*
½ *tsp. salt*
3 *eggs*
3 *c. milk*

Sift together dry ingredients. Beat eggs just enough to blend yolks and whites. Stir in milk. Add liquid ingredients to dry ingredients, stirring to mix well. Let stand two hours to thicken. Heat pancake griddle until water drops will dance on the surface; brush with butter. Beat batter again; spoon two tablespoons for each cake onto griddle. Brown on both sides. Spread with currant sauce; roll up and sprinkle with powdered sugar.

Currant Sponge

2 *envelopes gelatin*
½ *c. cold water*
1 *c. boiling water*
¾ *c. sugar*
½ *c. lemon juice*
¾ *c. cold water*
6 *egg whites*

Soften gelatin in ½ c. cold water; dissolve in hot water and add sugar. Stir until sugar is dissolved. Add lemon juice and remaining cold water. Chill until thick and syrupy. Beat egg whites stiff; add gradually to gelatin beating constantly. Mixture stiffens as you beat. Put berries through colander and fold into mixture. Pour into 2-qt. mold that has been rinsed with cold water. Serve with currant sauce.

Currant Punch

1 *c. sugar*
1 *qt. currant juice*
3 *c. apple juice*
1 *qt. ginger ale*

Combine ingredients and stir until sugar dissolves. Chill and serve over ice. Serves 24.

Casserole Dinners

Let a meal-in-one casserole take the work out of summer meals

by LILLIAN VIGRASS

SUMMERTIME is a busy time for all of us with the gardening, canning and freezing to do as well as the usual household chores. These casserole dishes, each almost a meal in itself, will save you time in the kitchen. Spices and flavorful sauces add a tang to each that will sharpen summer appetites.

If you are busy canning, make an oven-casserole dinner which can be prepared before time then popped into the oven the required time before dinner. Top-of-the-stove casserole meals can be served when the oven is already in use, or on days when it is just too hot to heat up the oven.

With a tossed green salad or vegetable plate, and fruit for dessert, any one of these casserole dishes will make a hearty and tempting meal.

Italian Spaghetti

- 4 *T. salad oil*
- 1 *clove garlic*
- ½ *lb. ground veal*
- ½ *lb. ground beef*
- 2½ *c. tomatoes*
- 2 *c. water*
- ⅛ *tsp. cayenne pepper*
- 1 *c. tomato paste*
- 2 *T. chopped parsley*
- ¼ *c. chopped celery tops*
- 8 *oz. spaghetti*
- *Grated cheese*
- 1 *tsp. salt*

Heat oil in frying pan; add chopped garlic and brown lightly. Add meat and brown slowly, only until redness is gone, stirring constantly. Add tomatoes, tomato paste, water and seasonings and simmer 1 hour. Add parsley and celery tops and simmer 1 hour more, stirring occasionally.

Cook spaghetti in 3 quarts boiling salted water until tender (20 minutes). Drain, rinse and drain well. Pour meat sauce over spaghetti and sprinkle with grated cheese. Serves 6.

Franciscan Meat Pie

- 3 *tsp. baking powder*
- 2 *c. sifted flour*
- ½ *c. shortening*
- 2 *tsp. salt*
- ½ *c. chopped onion*
- ⅔ *c. milk*
- 1 *c. drained, cooked tomatoes*
- 1 *lb. ground beef, veal or ham*
- 3 *T. catsup*

Make a biscuit dough of flour, baking powder, ¼ c. shortening, 1 tsp. salt and milk. For filling heat ¼ c. shortening, cook onion slowly to golden brown; add meat and brown well. Turn biscuit dough onto lightly floured board; knead 6 times and roll into circular shape to fit 9-inch pie pan. Fill with cooked meat to which has been added catsup and salt. Cover with drained tomatoes. Bake at 450° F. for 30 minutes. Serve hot. Serves 6.

Frankfurter Potatoes

- 6 *frankfurters*
- 6 *to 8 potatoes*
- 2 *c. green beans*
- 1 *c. vegetable stock*
- *Salt and pepper*
- 2 *T. butter*
- 2 *T. flour*
- 2 *T. prepared mustard*
- 2 *T. vinegar*
- 2 *T. sugar*

Cook, peel and slice the potatoes. Cook green beans until almost tender or use canned green beans. Simmer frankfurters 5 minutes, drain, cool and cut in 1-inch pieces. Place potatoes, beans and franks in casserole. Make a mustard sauce of remaining ingredients. Cook until thick, pour over ingredients in casserole. Place in 350° F. oven or over hot water in double boiler for 15 minutes.

Sauerbraten

- 4 *lb. beef chuck roast*
- 2 *T. shortening*
- 1 *c. vinegar*
- 1 *c. water*
- ½ *c. sliced onion*
- ½ *tsp. whole pepper*
- ½ *c. sliced lemon*
- ½ *tsp. whole cloves*
- 2 *bay leaves*
- ½ *tsp. ginger*
- ¼ *c. sugar*
- 1 *tsp. salt*
- *Dash of pepper*

Brown the chuck roast in shortening. Add remaining ingredients; cover tightly and simmer slowly 2 to 3 hours until tender. Make a gravy of liquid by adding ½ c flour mixed with ½ c. water.

Short Ribs Dinner

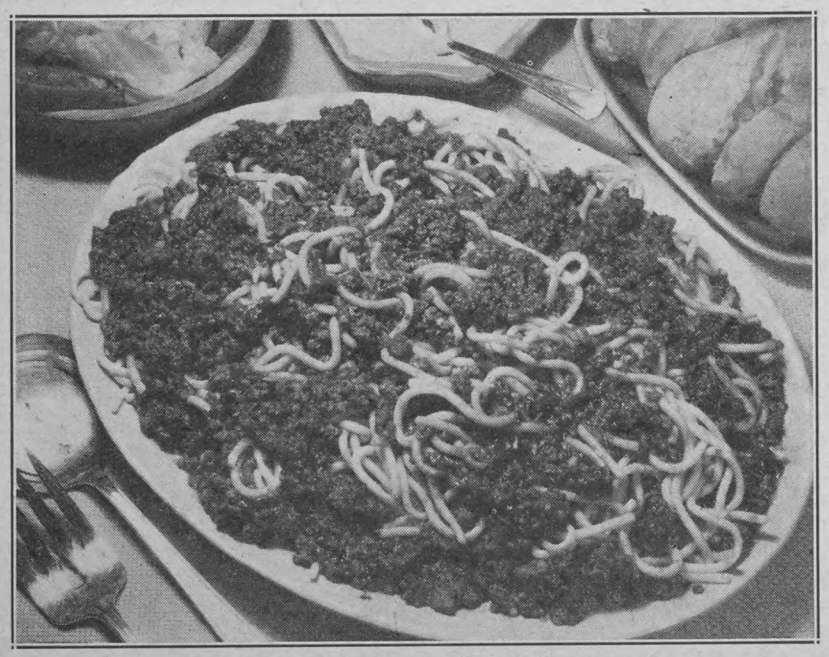
- 2 *lbs. short ribs*
- ⅓ *c. flour*
- 2 *T. fat*
- 1 *c. catsup*
- ½ *c. water*
- ¼ *c. Worcestershire sauce*
- 1 *tsp. chili powder*
- 2 *T. vinegar*
- 6-8 *large carrots*
- 6-8 *whole potatoes*
- 1 *tsp. salt*
- 2 *dashes Tobasco sauce*
- 1 *large onion sliced*

Dredge meat in flour; brown in fat. Combine catsup, water, sauces, spices and onion. Pour over meat and simmer 1 hour, covered. Add whole carrots and potatoes and cook 30 minutes longer. Serves 6.

Goulash

- 1 *lb. ground beef*
- 2 *T. fat*
- 8 *oz. package spaghetti*
- 1 *can vegetable soup*
- 1 *c. tomato juice*
- ⅓ *c. chopped onion*
- 1½ *tsp. salt*
- ¾ *tsp. chili powder*
- ¼ *tsp. pepper*

Brown meat in hot fat. Cook spaghetti in salted boiling water for 20 minutes; drain, rinse and drain again. Combine spaghetti with remaining ingredients. Combine beef and spaghetti mixture; pour into 2-quart casserole. Top with ¾ c. corn flakes. Bake at 350° F. for 1 hour.



Italian-style spaghetti with its rich meat sauce adds appeal to summer meals.

Give Yourself a Permanent

Proper care of hair and scalp, before and after having a permanent wave goes far to assure success

by **LORETTA MILLER**

Shelley Winters, movie star, finds a permanent an aid to short locks.

HAIR can be a problem or a joy during the summer months. It depends entirely upon its arrangement and the initial care you give it. First, a little daily care, followed by both a good shaping and a good permanent, will free any girl of the nightly pinning up and the daily struggle to keep it looking well dressed.

The amount of care necessary will depend upon two things: the type and texture of the hair; and how strictly the preliminary schedule is adhered to along with proper shaping and waving.

Silky, or baby fine, hair will require a bit more care than hair of coarser texture, but the rewards are well worth it. Because baby fine hair lacks body, it must be held in place by proper shaping. This permits each hair to "fall" where it wants, instead of trying to force it and hold it into place. It must be understood at the beginning, that proper shaping is of first importance. Straggly ends that stick out at odd places detract from any hairdo, but are especially noticeable on baby fine hair because such ends hang limp.

Before beginning the week's preliminary treatment, have a good haircut, asking your hairdresser to trim it short enough so that it will stay in place. Then start a brushing campaign, brushing vigorously every day for at least five minutes. Each night before retiring, rub a very small amount of hair pomade or oil over the ends of the hair. Use only a little of this as it has a tendency to give the hair a soiled and oiled look. Ask your local druggist to suggest a good preparation for your hair, then follow directions on the package.

The big pre-permanent "treatment" will do much to make the permanent a success. If you have a good scalp-and-hair oil you like, by all means use it, if not, you can make a splendid corrective oil for very dry hair and scalp by blending three parts pure olive oil to one part castor oil. Place this in a saucer or custard cup and mix well. Use a pad of cotton for applying it directly to the scalp and down the full length of the hair. This need not remain on for more than 45 minutes, then shampoo the hair well. Rinse out every trace of oil and soap. Give the hair at least three thorough latherings and as many rinsings as necessary.

HAIR that is coarse and bristly should be given the same preliminary care before giving it a permanent. Brushing is of equal importance to this type of hair because it softens it and makes it more obedient to waving and dressing. Brushing the hair also aids in normalizing the action of the oil ducts of the scalp so that both oiliness and/or dryness are corrected. This is true regardless of the texture of the hair, of course. Because of the difficulty in keeping coarse, bristly hair under control, it is almost necessary to keep it permanented, after it has been properly shaped.

Whether the hair should be cut before or after a permanent is an ever-recurring question. The best solution so far as your beauty editor can find is to do most of the cutting before the wave, leaving enough for a final trim a week or two after the permanent. The after-permanent trim enables one to do away with dry, split ends and to remove any fuzziness brought on by too-tight curling. A good plan to follow is to sharpen your scissors and do the preliminary cutting yourself about one week before you intend to give yourself a permanent. Then follow through with the daily brushing, weekly "treatment" and thorough shampoo.

Normal hair, whether it is blonde, brunette, red, grey or white, requires practically the same care. Any variance in the treatment will be necessary only because of the texture and condition of the hair. Quite naturally hair that has been dyed, bleached, or in any way had its color changed, should be given whatever treatment is necessary to put it in good condition before a permanent wave.

THERE are so many new home-type of permanent waves on the market that one only has to literally close her eyes and choose. And because all permanent waves must pass specific standards, they are safe to use. So simple are many of the newer home-permanents that any child who can read and follow directions can give herself a wave.

Leftover waving solution and neutralizer from your last permanent should be discarded. Time has a way of destroying mixed chemicals that may react unfavorably on the hair. It is also of great importance that directions *that come with the package you are going to use must be followed.* Previous directions should be discarded at once. It is important to do this because the makers of home permanents are ever on the alert to change and improve their product and quite naturally each improvement necessitates a change in their use.

Many of the manufacturers, working constantly to simplify their permanents, have found the finished wave equally lovely when the neutralizing process was either cut down or eliminated. Whichever brand of permanent you use, however, it is important to follow directions to the letter. If

directions suggest that you wait two, three, five or seven days before shampooing the hair, by all means do so.

The first shampoo and set *after* the permanent is important! Permanently waved hair has practically the identical texture as hair that is naturally wavy and both should receive the same training.

Shampoo the hair thoroughly and rinse all soap from hair and scalp. If the new permanent makes it difficult to comb through the hair, use a very light application of pomade, rubbing it lightly through the tangled hair ends. Do this while the hair is still damp. Then part the hair and comb it straight down from the part. Whether pin curls or waves are to be made, it's well to determine the effect you want before starting the setting procedure.

Regardless of the effect you want, it is necessary to turn each curl downward. This makes it possible for each curl to lie close to the head instead of fluttering out in wild wisps.

Make each pin curl small. First take up a small strand of hair, run the comb through it, straightening the wavy lock as much as possible, then make the pin curl and secure it in place. Work out a system of pin curls, making definite rows, and each curl the same size. Make the face-framing curls follow a definite pattern along the hairline.

The hair must be allowed to get thoroughly dry before the pins are removed and the curls combed. Then don't be afraid to use the comb and brush. Both of these accessories will emphasize the beauty and naturalness of the wave. Comb and brush the curls into place, then don't fuss with them. If the setting and dressing is done properly, your hairdo will stay lovely all day, with perhaps nothing more than a little combing mid-afternoon.

Handy Hints

Mark the wrong side of each piece of material with a piece of chalk as it is cut if it is hard to tell the right from the wrong side. This does away with any uncertainty when it comes time for the pieces to be stitched together.

* * *

To trim off extra material on the hem of a new garment slip it over the ironing board for cutting. It moves along easily and prevents accidentally cutting into some other part of the garment.

* * *

To take in or let out a seam when altering a garment stitch the new seam before removing the old. This saves basting and assures the proper matching of edges.

* * *

A powder puff attached to your wrist with a rubber band is a ready pin cushion for when you sew.

* * *

An extra change purse is handy as an away-from-home sewing kit. It will hold a pair of nail scissors, four spools of often-used thread and a small pill bottle of needles and pins.

* * *

Draperies for the bedroom can be made from colored sheets. One sheet 81 by 108 inches makes a pair of lovely draperies complete with pinch pleats. They are inexpensive and easily laundered.

When Writing to Advertisers Please Mention The Guide.

Animal Psychology

Continued from page 47

prawns so they would retain their deep pink color, usually lost in captivity.

In the lion house, behind the lion pit, an elderly matriarch with a magnificent coat and proud head comes up to the bars when she hears his whistle. He puts his finger through and scratches her behind the ears. She purrs like the family cat.

The birds of paradise, when he calls to them, begin to show off and perform acrobatics on their perches so that the light, catching their irridescent black feathers, turns them cobalt blue and red.

The koalas live in tall eucalyptus trees, nodding dreamily and philosophically in their branches. An unobtrusive fence around each tree protects this favorite marsupial (pouch bearing animal) from a doting public. But when Dr. Conenradd enters the enclosure with a few eucalyptus branches in his hand, they scramble down to rub noses with him and put furry arms around his neck.

In the wallaby (small kangaroo) enclosure, the hopping animals rush to the gate when he enters and playfully box at him.

In spite of a lifetime spent amongst animals known as wild, the curator has had no brushes with death, has never felt danger. His friends, it seems, appreciate the services of their psychiatrist.

Dr. J. Conenradd, curator of Taronga Park, pays a friendly visit to a rhinoceros.

"Wee Voyagers"

ATLANTA SOLLOWS in her Wee Voyagers, now in its second edition, has provided an interesting book for those who are interested in shell creatures and for those who wish to indulge in a hobby craft. In its preface she makes acknowledgement of the sources of material and expresses the hope: "that this text will in some measure fill a want, which is already felt. To the knowledge of the author there is no such book for students whether interested in shell-life or not."

In the introduction by a well-known journalist there is a brief story of Miss Sollows, telling how the author has gathered shells from all parts of the world and become expert in making them into amusing and attractive figures. This book and her "Climb The Rigging," a collection of nautical poems, were popular reading with men on overseas service. When one medical officer of a famous unit read "Wee Voyagers" he wrote at the request of his men for some of her shell birds.

Miss Sollows reply was a box of gamin birds, no more than an inch in height. Beautifully designed and colored with saucy little faces peeping beneath shell hats, these miniatures became so popular with the men that they were nicknamed "Squeaks." They became mascots from Canada. Fastened to the windows of cockpits, to ships' wheels and on the dashboards of bouncing jeeps, they travelled through clouds and smoke of battle.

The little book is profusely illustrated by actual photographs. It may be ordered direct from The Country Guide at $1.50 plus postage.

Experts Study Polio

AMONG the 26 expert committees which are to advise the World Health Organization on various aspects of its program in 1953 will be one on poliomyelitis.

Researches have now given definite clues to the development of an effective immunizing agent. At the same time, it has been found that the disease is far more widespread than had been generally believed.

Far from being a disease of temperate or cold climates, rare in hot climates and non-existent in tropical countries, it is now recognized that polio viruses are spread throughout all the peoples of the world. For example, although Japan was long regarded as being free from large-scale polio epidemics, the annual death rate, taken over the 21-year period 1923-43, reached 7.6 per 100,000 as against 8.9 for the United States.

Ed. Note: Mrs. C. J. Clark, Box 79, Erskine, Alberta, wrote asking if we could supply a copy of The Country Guide for October, 1930. That issue contained an article entitled "Margaret Lawrence—Thrice Pioneer," which was the story of a remarkable woman and her large family, who were known throughout the Peace River country. Regretfully we informed Mrs. Clark that we had no extra copies of that 22-year-old issue. This item appears with the hope that some reader may have a copy and be willing to furnish Mrs. Clark with the article clipped from it, as we sympathize with a granddaughter's wish to preserve for the family record the story of a truly remarkable woman of the North.

School Togs

No. 3668—Make a one-piece dress with weskit to match or contrast for a little girl's first days at school. The dress has a full skirt gathered to a tucked-front bodice that buttons down the front. Tiny collar may be white or in a contrast; the sleeves may be short or full length. Sizes 2, 3, 4, 6 and 8 years. Size 4 requires 1⅞ yards 35-inch material; weskit ¾ yard 35-inch. Price 35 cents.

No. 1183—A school blouse for fall and winter wear has a tie neckline, a small front yoke and short puff sleeves gathered to a band. Pattern also includes a version with lace on sleeves, the front and replacing the tie neck; a round-collar version with a double row of ruffles down the front; and a shirtwaist with long sleeves, convertible collar and patch pocket. Sizes 8, 10, 12 and 14 years. Size 10 requires 1½ yards 35-inch material; 1½ yards 39-inch for shirtwaist. Price 25 cents.

No. 2592—A four-gore flare skirt for back-to-school wear. Imitation pocket flaps may be added at the hips. A shaped waistband with shoulder straps, a cummerbund, and a flare skirt with a ruffle at the hemline are included in the pattern. Skirt width 97 inches. Sizes 7, 8, 10, 12 and 14 years. Size 10 requires 2¼ yards 35-inch or 1⅜ yards 54-inch material. Price 25 cents.

No. 3665—Back to school in a one-piece dress of plaid or plain. Bodice zips down the back, has a small round collar and a tie. Sleeves may be short or three-quarter length with a cuff. The skirt, which flares to a width of 118 inches, has immense pockets. Sizes 7, 8, 10, 12 and 14 years. Size 10 requires 3¼ yards 39-inch material. Price 25 cents.

No. 3697—A coat for fall and winter wear features a flare back, a raglan shoulder line and a shaped collar. Sleeves fit snugly at the wrist for warmth. If you wish, make collar and cuffs of velveteen on a plaid coat for fall. Width at lower edge of coat 76 inches. Sizes 7, 8, 10, 12 and 14 years. Size 10 requires 3¾ yards 35-inch or 2⅜ yards 54-inch material. Price 35 cents.

No. 3645—An extra-pretty dress for the next school term. Sleeves may be short and puffed or three-quarter length; the white collar and cuffs are detachable. The bodice, which may be tucked or plain, buttons down the front to a shaped midriff section. Skirt is slightly flared and gathered at the sides, front and back, to a width of 88 inches. Sizes 7, 8, 10, 12 and 14 years. Size 10 requires 3⅛ yards 35-inch or 2 yards 54-inch material; ⅜ yard contrast. Price 35 cents.

No. 2969—For a boy's first days at school make this slacks and shirt outfit. Slacks have cuffs, side pockets and flat fell side seams. Elastic at waist helps keep them in place. Shirt may be made to wear inside or out—with two large patch pockets at the front. Sleeves may be short or long. Sizes 2, 3, 4, 5, 6 and 8 years. Size 4 requires, for shirt 1 yard 39-inch; slacks 1¾ yards 35-inch or 1 yard 54-inch material. Price 25 cents.

Note price, to be included with order. Write name and address clearly.

State size and number for each pattern ordered.

Patterns may be ordered from The Country Guide Patterns, Winnipeg, Manitoba, or order direct from your local dealer.

Simplicity Patterns

Writer and Soldier

A sketch in tribute to an editor, who served The Country Guide for many years

PETER MACDONALD ABEL, Editor, The Country Guide, died at the age of 62 in Deer Lodge Hospital, Winnipeg, on July 2. The presses were already turning out the July issue, and a brief tribute only was possible on the last—the editorial page, which he had completed and corrected earlier that day.

Possessing many talents, he chose to devote them to two major interests: journalism and soldiering. Born in Dutch Guiana, the son of a sugar planter, the family of three small boys were taken by their widowed mother to New England. As a very young lad, Peter struck out on his own to western Canada, to earn a living and learn about farming the hard way, working as a hired hand and homesteading near Earl Grey, Saskatchewan. At the age of 19, he enrolled for a degree course at Manitoba Agricultural College, graduating in the spring of 1913. Armed with the coveted "sheepskin," he headed for Alberta, and got his first "feel" of journalism by working as Associate Editor of The Farm and Ranch Review.

The fall of 1913 found Peter M. Abel, B.S.A., engaged as lecturer in Animal Husbandry and English in the School of Agriculture, Claresholm, a position held until he joined the Royal Canadian Army Service Corps in 1915. Enlisting as a private, he was twice mentioned in overseas dispatches, and returned to Canada early in 1919 holding the rank of captain. He married Miss Ethelyn Knight of Claresholm, a former student in his English classes.

Col. Peter M. Abel, O.B.E.

In August, 1919, he joined the staff of The Grain Growers Guide as Associate Editor, specializing in writing on livestock. Articles from his pen appeared under two other by-lines: Peter MacDonald and Pierre Le Grande. He attended fairs and livestock meetings and, by reason of his undoubted flair for writing, built up a reputation as one of Canada's leading agricultural journalists. Having an eye for anatomy, and artistic skill, he would on occasion sketch animals. Some of the sketches appeared in this magazine. He also applied his skill to provide suitable "layouts" for feature pages.

In 1936, P. M. Abel and R. D. Colquette were named Joint-Editors of The Country Guide. In 1940, the former, having functioned in the reorganization of the ammunition column of the R.C.A.S.C. with the Non-Permanent Militia, went on Active Service with the rank of Lieutenant-Colonel.

Early the following year, he left for overseas and became Deputy Director, Quartering and Movement, Canadian Military Headquarters, London, England. He was given the rank of Colonel in October, 1943. Before leaving England, Col. Abel was awarded the O.B.E. in recognition of distinguished service. He took time off from military duties to do a series of articles for The Country Guide on agricultural conditions in western European countries.

August, 1946, saw Peter MacDonald Abel back at his old editorial desk. With a characteristic "lack of side" he became again simply "P. M." to office associates and in use of signature to articles. He was familiarly "Pete" to his old livestock friends and his classmates, but strictly the "Colonel" to all who knew him in military circles.

In addition to articles, he now wrote editorials. He was a craftsman in words, delighting in the apt turn of a phrase, shades of meaning, and dramatic presentation. In the thirties, he had dabbled at fiction, and applied the principles of good story construction to his judging and writing of fact, placing high value on interest-catching and entertainment values to put across what otherwise might be rather heavy-going information. With perceptions sharpened by practice and long experience, he was qualified to aid young and aspiring writers and artists toward turning out better work. Grateful letters from artists and writers gave evidence that he did so, many times.

Peter M. Abel leaves his wife, his mother, three sons—John, Peter and Keith—and one daughter, Lynn. His office associates, many business and close friends, join in mourning the man who, buried with full military rites, lies in a soldier's plot with the customary simple marker. His work remains his best monument and his family a continuing memorial.

Talking Turkey

Contained from page 9

with a thin-bladed knife, and a heavy pail is hooked in the bird's mouth to reduce blood splatter. The flight feathers and big tail feathers are picked off and the bird semi-scalded at 130° F., for one minute before the automatic plucker is used. Pin feathers are hand-picked. Most of James' dressed birds are sold to the hotel trade in Winnipeg.

After the market birds are killed, the flock is officially inspected by representatives of the Manitoba Department of Agriculture. Birds are selected that are free from disqualifications, and are tested for pullorum and leg-banded, to give them approved flock status.

The approved birds are moved from the range to the laying house. Many changes have been made in the old horse barn. All of the stalls and pens were torn out on the ground floor. The barn was 16 feet at the plate and the floor of the loft was only eight feet up, so the Frasers put in a second floor 16 feet above the ground.

THERE are four pens on the ground floor, two capable of accommodating 20 hens each, and two capable of holding ten each; also 13 pens, each about two-and-a-half feet by six feet, for holding single toms. At the second level there is one tom in each of the three pens. One wall of each pen is made of light poplar poles so spaced that the hens can pass between, but the toms, which are larger, cannot get out. This floor accommodates 100 hens.

The same number of birds can be accommodated on the third floor. There are no separate pens and the hens and toms roam at will. James plans to alter this floor and make it the same as the second. At present each pen on the two lower floors has a self-feeder, and the top floor has four self-feeders placed at the center of the building. These have four separate compartments, with whole oats in the first, 21 per cent protein laying pellets in the second, grit (crushed granite) in the third, and oyster shell in the fourth.

The breeding technique varies on the three floors. Last year the two smaller pens on the ground floor each contained ten selected quality females and a selected male, one pen being broad-breasted bronze and the other Nebraska. The eggs from these pens are kept separate and the poults' toes punched. Most of James' breeding hens for this winter will come from these two pens.

For the first two weeks of the breeding season (late January and early February) toms are changed every two hours during the day, but later in the season they are changed only twice a day.

Having three penned toms on the second floor, with the hens free to come and go as they please, permits the hens to choose any male. It is thought that some hens will not mate with certain toms, and that allowing a measure of choice may increase fertility. On the third floor there is only one tom at present, but free selection between three is to be introduced in this large pen.

James uses lights to lengthen the working day. They are turned on for the toms six weeks before the beginning of the laying season—the first or second week in December—and for the hens around the beginning of January. At the beginning they are on from 7:00 a.m. to 6:00 p.m., but are left on 15 minutes longer each day until they are on from 5:00 a.m. to 7:00 p.m. On dull days the lights are used all day.

In spite of precautions observed, the percentage hatchability was disappointing this spring. Only 54 per cent of the broad-breasted bronze and 66 per cent of the Nebraska eggs hatched. Hatchability is admittedly variable but this experience was particularly disappointing as the same techniques produced a 73 per cent hatch two years ago.

Frequent reference has been made to Nebraska turkeys. Don has not gone into this new breed, but nearly half of James' birds are Nebraskas. This breed is like the broad-breasted bronze, but has a finer bone and is slightly smaller. Its chief merit compared with the bronze is that the pin feathers are white, giving an attractive carcass, regardless of the age at which the bird is dressed. If the turkey broiler business should become important in Canada—as it already has in the United States—the Nebraska might become a popular breed. In the distance the bird appears streaked with grey.

James Fraser is building up an enviable reputation in show competition. In 1950 he exhibited the grand champion bird in the live division at the Brandon poultry show; in 1951 he again won the grand championship in the live division, and added to it a first with a hen, the grand championship in the dressed division and several other lesser prizes.

ONE essential measurement that must be applied to any form of agricultural production is the probability of being able to make a living at it; and with this in mind it might be well to glance at James Fraser's costs and probable returns for this year.

The feeding of the laying flock last winter and of the birds on range this summer has required about 1,600 bushels of grain—1,200 of oats, and 400 of wheat. They have consumed three tons of supplement at $117 a ton, about two tons of starter at $100 a ton, one ton of finishing ration worth $100, and other miscellaneous feeds. On the receipt side, James sold $4,400 worth of poults this spring. Allowing for the 200 hens he will keep, he also will sell 350 surplus birds this fall. It will be a poor season indeed, if they are not worth $1,750. Too, fearing a market break because of the 70 per cent increase in the turkey population in Canada, James has cut his turkey numbers and the turkey flock therefore has not eaten up all the grain he produced last year. Income from turkeys has been greater in previous years but there has been no sale of grain. This year, which is not likely to be a really good season, James will have $2,500 to $4,000 from poult and turkey sales to pay his miscellaneous costs, his capital charges and his work.

Many large-scale, specialized farmers are rather scornful of poultry. The Frasers of Gunton have illustrated that this scorn may be based on prejudice rather than on a careful study of the economic facts.

Fly Fishing Near Home

Taking wily fish with light tackle is a challenge to young sportsmen

by KERRY WOOD

FISHING with flies has an attraction for most boys, but in the near-home waters of western Canada there are comparatively few regions within walking distance of good trout streams. So boy anglers content themselves with worm fishing for perch or casting wobblers for pike and walleyes. Yet these same coarse fish can provide marvelous sport on artificial flies.

My home river had a goodly supply of pike and walleyes, the silvery-sided goldeyes, and an overabundance of despised suckers when I first took up fishing; in a lake nearby the perch thrived. None of these are considered fly fish, but soon after the fever got into my blood I snaffled onto a fourth-hand fly rod. My dad had a battered wallet brought from Scotland, and in it were faded and moth-eaten flies which became my first artificial lures.

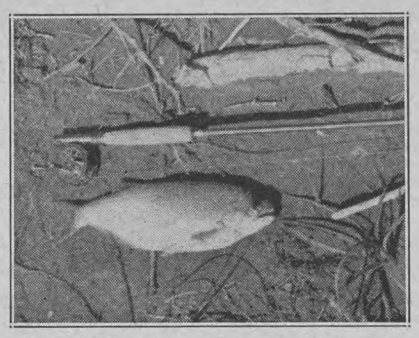
Right from the start I discovered that the sporty goldeye was a voracious fly feeder, providing wonderful exercise for the old greenheart rod as the beautiful fish rose to snap at my crudely offered flies.

But how could I catch the deep-lurking pike and pickerel? Well, I had some lead in my kit, and folded small fragments over my gut leader about six inches ahead of my largest and brightest fly. I chose a red fly, because red-colored plugs were favorites of our river pike and pickerel. Then I cast this weighted fly into an eddy, allowed plenty of time to sink, retrieving it finally in little spurts by jerking on the rod and line. On the second try, there came a terrific yank and I caught a glimpse of the long, tiger-marked body of a pike before the line slackened and the rod jerked straight. My fly was gone, the gut leader badly frayed at the end.

For want of something better, I took some fine cabled picture-wire and secured my largest fly on this, the wire being heavy enough to sink the fly without using an additional lead weight. On the fourth cast I had a strike and happily played a two-pound pickerel into shore. Soon after, I caught a couple of pike on the battered remains of a Red Ibis fly. They favored bright flies such as Ibis, Royal Coachman, Silver Doctor and the red and white Parmachenee Belle. The deep swimming pickerel liked the Par-Belle best of the flies I used, while goldeyes preferred Western Bee and Black Gnat.

When next I went to the perch lake, I carried my battered old fly rod with me. I used lead on the leader to sink my Coachman fly down to the five-foot depth where the perch were swimming. I could stare into the clear water and watch the fly sink until it was near the lazy perch, then jiggled the rod tip and the perch rushed furiously at the dancing fly. It was much better than worm fishing.

One sunny day in mid-summer I noticed fish rising in foot-deep water of a river shallows. Neither goldeyes nor pike nor pickerel favored water so shallow, so I waded out to spy on the rising fish. To my amazement, they proved to be suckers. Each fish was lurking behind a big rock, lunging



A fly rod and a silvery goldeye that snapped at Western Bee fly.

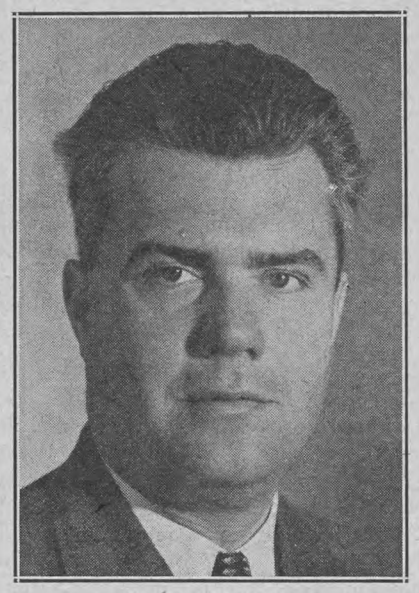
to the surface as a fly came along and exposing its gaping toothless mouth to suck in the insect. This was the first time I'd seen suckers fly feeding, and I set up my rod at once. A sucker rose to my fly, but I struck at once and got nothing. Three more strikes did not yield a single fish, so I changed my tactics. With suckers, let the fish suck in the fly and make no move until the fish has returned to its lair. Then a sudden strike will set the hook, and a sucker can give any angler a busy battle.

Fly fishing yields more excitement than the use of metal wobblers or plugs bristling with treble hooks. Such large lures force the fish's mouth wide open and they soon tire of the fight. Indeed, they are really half-drowned because of the mouth-open position caused by the large lure. But fish can clamp their jaws shut on small fly hooks, hence a better battle results.

Don't wait until you can visit a trout stream. Go fly fishing for pike or pickerel, perch or suckers or goldeyes in the near-home waters and you'll get twice the fun from your fishing sport.

J. R. Weir, Manitoba Dean

DR. J. R. WEIR, professor and assistant head, Department of Field Husbandry, Ontario Agricultural College, Guelph, has been appointed dean of agriculture and home economics at the University of Manitoba, where Professor J. M. Brown, head of the Animal Science Department, has been acting dean since the resignation of J. W. G. MacEwan in April, 1951. Dr. Weir is expected to assume his new duties in September.



Dr. J. R. Weir

Born in 1912 at Wingham, Ontario, he secured his elementary and secondary education there, and in 1932 his first-class teacher's certificate at Stratford Normal School. In the same year, he entered the Ontario Agricultural College, specializing in field husbandry, and secured a degree from the University of Toronto in 1936. For several years, he was engaged as student assistant in the Cereal Division at the Central Experimental Farm, Ottawa, interrupting this work to become graduate assistant in the Department of Field Crops at the University of Alberta, where he specialized in plant breeding and genetics, and obtained his master of science degree in 1938. During 1938-40, he did post-graduate work at the University of Minnesota for his doctor's degree, which he received in 1940, after having been engaged as research assistant in the Division of Agronomy and Plant Genetics, where he gave special attention to plant breeding, genetics and plant physiology. During the period from 1940 to 1952, he rose from lecturer at the Ontario Agricultural College to professor and assistant head of the department, and has been in charge of forage crop breeding and research. He has lectured to under-graduate and graduate students in plant breeding, genetics and forage crops. During this period, 13 improved forage crops (nine grasses and four legumes) have been accepted for registration by the Canadian Seed Growers' Association.

Dr. Weir is chairman of the Legume Research Committee in Ontario; a member of the Plant Breeders Committee (Forage Section) of the Canadian Seed Growers' Association; member of the Associate Committee on Plant Breeding (National Research Council); and member of the Standing Committee on Field Crops in Ontario. In 1949 he attended the Fifth International Grassland Congress in The Netherlands, and visited the leading agricultural research stations in several European countries, including Belgium, Denmark, France, Sweden, The Netherlands, Norway, and the United Kingdom.

The new dean is highly regarded by those who know him and his work; and friends of agriculture, and of the University of Manitoba, will welcome the appointment.

The Barn

Continued from page 8

"Why not?" Father asked, watching the painters.

Mother looked at the barn again. "It doesn't look right. It would be . . . it would be an eyesore."

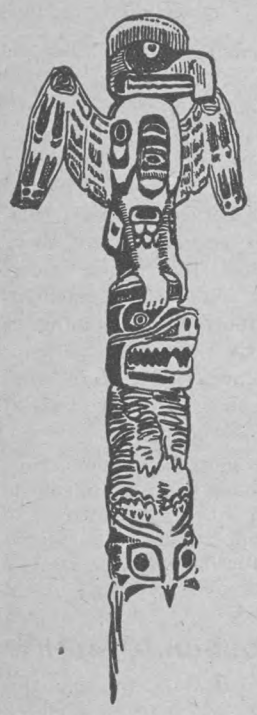
"I like purple," Father said dreamily. "It's the color of royalty."

Mother took another look at the glaring patch on the side of the barn and then she turned to Father. When she spoke, she spoke with reluctance, but I could see she was finding it hard not to smile. "I've been thinking about the house," she said. "I believe I prefer green after all."

Father sprang to his feet, glanced at the painters, and then put his arm around Mother's waist and gave her a big kiss.

"Hold it!" he called to the painters. "That's enough of the purple. Bring on the red."

The Country Boy and Girl



HAVE you seen pictures of totem poles and wondered just what they were? Those queer faces and animals, were they supposed to tell a story? Yes, they do tell a story of an Indian family or tribe—a sort of family tree! It became the fashion for a chief to put up a totem pole to show how powerful his tribe was or to tell what great events had happened in his tribe—such as the adventure of an Indian hero or the story of a victory won by the tribe. No ordinary person attempted to carve a totem for the work was done by the artists and their helpers. Since the artist wants to tell many things on the totem, he must make the figures and animals very close together and that is why you see the birds, people, gods and animals on a totem carved with their arms and legs held tightly against their bodies and drawn up as if the figures were squatting. The totem pole artist made his paint colors from nature—ochre for red, brown and yellow, copper clay for bluish green, and baked clam shells for white.

A great feast or potlatch was held in the tribe when a new totem pole was to be set up. The stories of the totem were told and often acted in plays or sung in songs. Totem poles are a kind of art which cannot be found anywhere else in the world except in North America. They were first made by the Indians of British Columbia and Alaska. Now the province of British Columbia uses the totem pole as one of its provincial emblems.

Try your hand at whittling a small totem—use basswood, white pine or poplar in a piece two inches long, half-inch wide and half-inch thick.

Ann Sankey

Cowboy Tommy

by Mary Grannan

TOMMY ANDREWS sat on the floor in front of the radio, listening to his favorite program. It brought him tales of the cow country, and cowboys. The hero of the stories was Rocky Rivers.

When the sound of Rocky's galloping horse faded in the distance, Tommy went to the kitchen. His mother smiled up at him from her work. "Well, did Rocky catch the rustlers tonight, Tommy?"

"Yes, Mum, he did. He caught them single-handed and took them to the sheriff, and then what do you suppose happened?" asked Tommy, still wide-eyed about the exciting adventure he had just shared.

"I'd never guess," laughed Mrs. Andrews. "What did happen?"

"Rocky was coming home from the sheriff's office, and was crossing the plains, all alone in the sunset, when a wild coyote jumped at him and his horse. The horse was so frightened it stood up on its hind legs, and neighed, but Rocky reached for his lasso, threw it and caught the hungry coyote, and dragged it into the ranch with him. He's got it chained now, in the corral. He doesn't know what to do with it."

"It is quite a problem," laughed Mrs. Andrews.

"Yes," said Tommy, "but Rocky'll solve it. He always knows what to do."

"He's your hero, isn't he?" said Tommy's mother.

"Oh yes," said Tommy. "I wish I could meet him. I wish I could ride the range with him. I'd like to be his pardner. But I guess that's like wishing for the moon."

"Oh, I don't know," said mother, "stranger things have happened."

Mrs. Andrews didn't know how close to the truth she was when she said those words. It was the very next evening that she found out. Tommy, in his usual place in the living room, suddenly called out, "Mum, oh Mum, come here, hurry!"

There was such urgency in Tommy's voice, that his mother did hurry. Rocky Rivers was making an announcement.

"The boy," Rocky said, "who writes the best verses, to the old cowboy song, 'Home on the Range,' will be my guest for a week, at the Flying U Ranch. He'll ride one of my pintos, and go with West Wind and me, to the fall round-up."

"'West Wind' is Rocky's horse," explained Tommy. "Wouldn't it be wonderful to win? I wish I could."

"Well, why not win?" asked mother calmly. "You've as good a chance as any other little boy."

Tommy shook his head. "I'm no good at writing verses," he said.

"How do you know you're not? Have you ever tried?" asked mother.

Tommy shook his head again. "Try," said mother. "There's nothing like trying. If you lose, it won't hurt you. You know a great deal about cowboys."

"Yes," said the little boy. "I know that a fence rider is a cowhand who checks fences, and that a drag rider is one who rides behind the herd. I know that a latigo is the leather strap that fastens the saddle to the horse, and that a maverick is a little orphan calf that isn't branded. I know that the cowboys wear large hats to keep the sun off in the summer, and to keep their ears warm in the winter, and that they use the 'kerchiefs around their necks to keep the dust out of their noses in sandstorms."

"Get some paper, and a pencil," said mother "and go to work at the verses for the song. Think carefully, as you write."

Tommy did work carefully. He wrote, and rewrote, all that evening. The next morning, he started all over again. At last he called his mother to hear what he had written. She played the music, while he sang:

"If I were to go, to live on a Rancho,
I would work from sunup to sundown
I'd ride the range too, and with my lasso,
I'd rope little mavericks, brown.
Poor little lost stray,
Your worries are over, I'd say,
I'll take you back home,
Where you won't be alone,
I'll feed you good oats, and good hay.

If I were to go, to live on a Rancho
I would tend to my saddle and straps,
And a cowboy of course, looks after his horse
His stirrups, his bridle and chaps.
My boots I would clean,
My saddle bags I'd polish too,
I'd be ready to ride, with my guns at my side,
Anytime, at the Ranch Flying U."

Tommy looked anxiously at his mother. She smiled. "I think it's very good, Tommy. But I don't know what Rocky will think. We'll post it right away, and wait. That's all we can do."

It seemed an endless time until the day when the winner was to be announced. Tommy sat, almost breathless, waiting for the story to come to an end, and then Rocky stepped out of the story to say:

"I plumb reckon," he said, "that you're all waitin' to hear who is goin' to be my guest. I've had quite a chore, decidin', but I've chosen, fair and square. I think you'll agree with me, when you hear the song. I'm going to sing it now."

The music began, and Rocky sang Tommy Andrews' song.

"It's mine, Mum, it's mine. He's singing my song," cried Tommy.

When the song was finished, Tommy heard his name read as the winner. Rocky said, "Tommy, I chose your song because you showed willingness to work, kindness to the little mavericks, a wide knowledge of a cowboy's gear, and a readiness to co-operate at any time you are called upon. Congratulations, Tommy. I'll be seein' you."

Tommy ran to his mother. "Thank you, Mum. If it hadn't been for you, I might not have won. You told me that anything worth having was worth working for. And you were right. Mum, I'll have so much to tell you, after I get back from the Flying U."

Sketch Pad Out-of-Doors

***No. 7 of series—by* CLARENCE TILLENIUS**

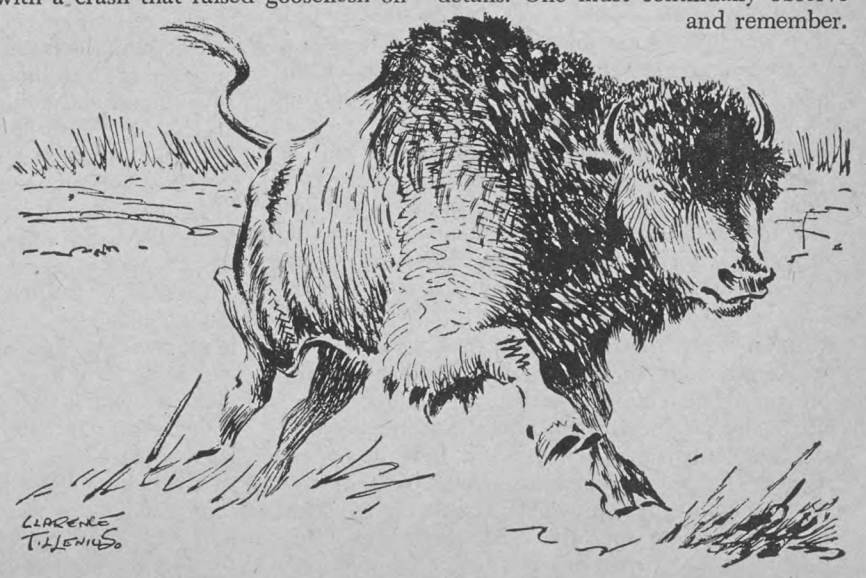
A CHARGING buffalo cow might not perhaps be regarded as a highly desirable model but one never knows what may be useful to the illustrator.

One day in spring I had gone to the park to draw the buffalo—or more properly, *bison*. After making some sketches of the old bull who was sleeping in one of the enclosures, I wandered around to the pasture where the cows and calves were kept. A cow and her young calf were resting near the fence, the calf somewhat farther away. The fences are double around most of the pens, but was single here, since people did not usually go around to that side.

Standing close to the fence, I made several studies of the cow, who then turned her back on me. To gain her attention, I reached through the fence and slipped some popcorn in her direction. I had barely time to leap back from the fence when she struck it with a crash that raised gooseflesh on my scalp. The fence bulged outward, and a second crash as loud as the first, decided me to retreat to a safer vantage point, whereupon the cow returned to her calf.

In a situation like this, the artist tends to think more of saving his skin, than of any artistic possibilities of the scene. But strangely enough, if you are accustomed to drawing at all times, your eye automatically takes note of various details. In this case, I made some small action sketches like the one shown. Years later, when The Country Guide asked me to illustrate a story which called for a buffalo hunt, I dug out those old sketches and, using them for a basis, worked out the illustration.

One learns continually. Had I at that time been more familiar with buffalo, I would have known when the cow raised her tail stiffly in the air, that she was going to charge. That is what is meant by observing details. One must continually observe and remember.



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Supreme Court Decision

Farm marketing co-operatives in Canada are now a good step nearer the goals for which they have been steadily working for many years, namely, the right to organize commodity marketing provincially, inter-provincially, and for export, through provincial and inter-provincial marketing boards. The recent decision of the Supreme Court of Canada, in the case of the Prince Edward Island potato marketing scheme, reversed a previous decision of the Supreme Court of Prince Edward Island on two of the four questions referred to it. By unanimous decisions the higher court clearly established the jurisdiction and competence (1) of the Parliament of Canada to enact the Agricultural Products Marketing Act, 1949, and (2) of the Governor-General-in-Council to pass Orders-in-Council delegating to provincial boards set up under provincial marketing acts, powers which would enable them to operate in the inter-provincial and export fields.

The majority of the court, however, denied the right of the government of Prince Edward Island to establish a marketing scheme which would permit the board administering the scheme to delegate powers to a limited number of named representatives instructed to act conjunctly with representatives named by other provincial marketing boards, for the purpose of regulating and co-ordinating the marketing of a commodity produced in such provinces. Validity was also denied to two orders of the P.E.I. Marketing Board setting forth the manner in which an operating fund was to be established for the scheme, involving a levy of one per cent per 100 pounds, on all potatoes sold by producers.

The story of federal marketing acts goes back beyond 1934, in which year the Bennett government secured the passage of the Natural Products Marketing Act. When the government was deposed in the general elections of 1935, the successful Liberal government announced its intention of testing the validity of this Act in the courts. The Privy Council ultimately declared the Act to be ultra vires of the powers of parliament, because it appeared to interfere with the rights of the provinces. The new government appeared reluctant to introduce a better act. Moreover, during the period of World War II, bulk contracts were customary with Britain for surplus Canadian farm products, and the edge of demand for a new Act was somewhat blunted by this fact, and by the facts of war prosperity and unlimited markets.

Whatever the factors involved, it was 13 years before the demand was sufficiently insistent to persuade the government to approach parliament again. No doubt an important factor was the growing desire of the government to get out from under the actual sale of surplus farm products, and return this onerous responsibility to the producers and their provincial governments. In any case, the P.E.I. potato marketing scheme was the first under the new Act to be tested in the courts. The Supreme Court of P.E.I. refused to render a decision, and passed the responsibility to the Supreme Court of Canada. The higher court in turn refused to consider the case until it had been first considered and judgment rendered by the Supreme Court of the province, which subsequently decided adversely. The second appeal to the Supreme Court of Canada then followed.

Presumably, the next step in the long search for stabilized marketing through co-operatives and provincial marketing boards, will follow further urging by producer organizations and further consultation between provincial and federal governments. The problem of making possible the practical operation of provincial marketing boards, whose products must find an outlet in inter-provincial and export markets, would not appear to be an insuperable one. Perhaps it may be necessary to continue the process of trial and error, in the effort to find a method by which provincial boards can best function together to the advantage of the producer, while at the same time fully safeguarding the public interest. So far, all that appears to have been gained by the Supreme Court decision is validation of the Agricultural Products Marketing Act, 1949, and the right of the Governor-General-in-Council, under this Act, to delegate marketing powers in the inter-provincial and export fields to provincial marketing boards.

Presidential Contest

He would be a wise man indeed who could predict the result of the forthcoming U.S. elections in November. The distrust, by the American voter, of the Republican party over the past 20 years, together with the task which faces General Eisenhower of patching up serious differences within his party, argue against his election, as does his lack of experience. On the other hand, his very great personal popularity, the glamour attached to his name, the fact that he turned down what is believed to have been an offer of the Democratic nomination, and the fact that his experience has developed a strong international point of view for him, all strengthen his chances. Governor Stevenson, on the other hand, is comparatively unknown nationally, although he has behind him a very successful record as governor of Illinois. The fact that corruption during the Truman administration would ordinarily handicap his candidature, is offset to a considerable extent by the fact that he is demonstrably an anti-corruptionist, as proven by his experience as governor. He has the support of President Truman, who has promised a whistle-stop tour with his coat off. Moreover, it was the party leaders who brought about his nomination, in contrast to the split between the officers and privates of the Republican convention. What evidence there is indicates a higher percentage of Democratic supporters than Republicans in the country. It would appear that the contest will be fought very largely on domestic issues, since both candidates are likely to find little to argue about in the international arena. The contest also promises to be clean, as far as the candidates are concerned.

This leaves Canada where she is likely to be satisfied with either candidate, although it is worth remembering that in the past our uneasiness has usually been greater under a Republican administration.

The Call of the Universities

Within a few weeks Canadian universities will be opening their doors to a new group of students, who, after graduation in the spring of 1956, will begin justifying the efforts of their parents and the state, as well as their own application of time and energy throughout their under-graduate days. It is doubtful if there ever was a time in the history of Canada when graduates from universities were so much needed in almost all appropriate fields of human endeavor. It is recorded that in the U.S. there is one working engineer for every 60 industrial workers; that in the industrial laboratories maintained by private U.S. companies the number of research workers employed has risen from 57,000 to 70,000 in the last five years; and that the number of scientists, technicians and engineers in both government and industrial laboratories in 1947 was nearly four times the number employed in 1930.

Undoubtedly, the most important factor in the increase of productivity per man, in industry and in agriculture, has been the impact of science and technology. So important is it in farming that the young farmer of today who has not had the advantage of a university course, or who has not attended one of the schools of agriculture for at least two years, is likely to be seriously handicapped in the future. Canadian farms stand in very great need, not only of more graduates from our colleges of agriculture and universities who can become first-class teachers, extension or research workers, but of graduates who will return to the farms and there develop what they have learned into wise land use, improved crop and livestock production, and an enrichment of rural living. An astute and widely known farm consultant across the line has recently commented that the impact of science and technology on farming has removed the burden of the farmer from his back to his head —and made it more difficult to carry.

While it is reasonable to expect the young people themselves to be alert to the implications of the period in which they approach maturity, there is also an obligation on the older folk to encourage, rather than to discourage, the ambition to learn and develop. In most cases, some sacrifice is involved in such encouragement. It is a notable fact that the enrolment of students in the agricultural colleges of our prairie universities has been relatively small in past years. In certain periods there was ample excuse, but in 1952 this excuse is certainly not valid to anything like the same extent, in many farm homes. The Country Guide commends to farm young people and their parents this comment on education and training in agriculture, from the current prospectus of courses in agriculture at the University of Manitoba:

> "Science and the farmer must be partners from this day forward, and any young man who intends to farm or do work in the great and challenging field of agriculture should seek opportunity to fit himself for the tasks which go with the world's principal business, that of producing human food."

Freedom from Foot-and-Mouth

It seems highly probable that about the time this issue reaches our readers, Canada may be declared free of foot-and-mouth disease. The Minister of Agriculture has suggested the likelihood that if no new evidence of the disease is discovered, the official declaration will be made and quarantine regulations for the quarantine and buffer zones lifted on August 19. For some time past, owners of quarantined premises have been able to bring animals onto the premises for restocking, which are kept under observation by federal veterinarians.

The nearly six-month period since the disease was first identified on February 25 has been an anxious time for all concerned. Even now, some mystery remains attached to the three-month period from November 20 to February 25, during which the disease apparently existed in very mild form, from which infected animals appeared to recover very quickly.

Canada's first experience with foot-and-mouth disease was unique in still another respect, in that the source of infection remains unknown. That it appeared in a province as far inland as Saskatchewan was surprising; and that its first eruption was in an area not noted for livestock production was altogether fortunate. It is to the credit of the Health of Animals Division of the Canada Department of Agriculture that, once the disease was identified, action was prompt and thorough.

Aside from the actual presence of the disease in Canada, its most disturbing aspect has been the extent of the ramifications resulting from the outbreak, reaching into practically all phases of Canadian agriculture related in any way to livestock. The prompt and justifiable embargo by the United States against all livestock and nearly all livestock products, as well as feeding stuffs, had a very disconcerting effect. The embargoes by eastern and western provinces against the movement of livestock to and from stockyards exerted effects which went far beyond the quarantine and buffer zone areas. Similarly, the effect of the outbreak on the movement of seed and feed, the shipment of commercial grains, the exhibiting of livestock at exhibitions, the slaughtering of market livestock within the areas concerned, and the auction sales of purebred cattle, to say nothing of the effect upon our export of both commercial beef and purebred dairy cattle, all came as an unwelcome surprise to a country unaccustomed to such happenings. All in all, those responsible for controlling the outbreak and freeing the country of the disease, since February 25, have come through it with credit. Should the quarantine be lifted on August 19 as anticipated, a further waiting period of 60 days (and probably more) will be required before the U.S. Secretary of Agriculture will feel satisfied to lift the import ban on Canadian livestock and other embargoed products.